JVC

GM-F470S
GM-F420S

INSTRUCTIONS

LCD DISPLAY MONITOR

The illustration of the monitor is of GM-F470S.

• Be sure to read through “Safety Precautions” (pages 2 and 3) before using the unit.

Table of Contents

Safety Precautions 2
IMPORTANT SAFEGUARDS 2
Maintenance 3
Installation 4
Parts Identification 5
Connections 6
Available signals 8
Daily Operations 10
Menu Operation 12
Menu Configuration—MAIN MENU 13
Menu Configuration—SET-UP MENU 15
Using the Motion Sensor 18
Outline of the motion sensor 18
Installation and connection 18
Setting 19
How to Use External Control 20
About the external control 20
Using the serial communication 21
Using the MAKE/TRIG. system 22
Using the LAN system 23
Troubleshooting 26
Self-diagnostic indication 28
Specifications 29
General 29
Input/output terminals 29
Dimensions 30

LCT2505-001A-H

Safety Precautions

CAUTION

RISK OF ELECTRICAL SHOCK DO NOT OPEN

CAUTION: To reduce the risk of electric shock. Do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE. NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

IMPORTANT SAFEGUARDS

Electrical energy can perform many useful functions. This unit has been engineered and manufactured to assure your personal safety. But **IMPROPER USE CAN RESULT IN POTENTIAL ELECTRIC SHOCK OR FIRE.** In order not to defeat the safeguards incorporated into this product, observe the following basic rules for its installation, use, and service. Please read these "IMPORTANT SAFEGUARDS" carefully before use.

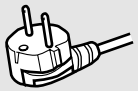
- All the safety and operating instructions should be read before the product is operated.
- The safety and operating instructions should be retained for future reference.
- All warnings on the product and in the operating instructions should be adhered to.
- All operating instructions should be followed.

POWER CONNECTION

The power supply voltage rating of this product is AC 120 V (For U.S.A. and Canada) and AC 220 – 240 V (For European countries, Asian countries, and United Kingdom).
The power cord attached conforms to the following power supply voltage and countries. Use only the power cord designated to ensure safety and EMC regulations of each country.

For U.S.A. and Canada: AC 120 V

For European and Asian countries: AC 220 – 240 V



For United Kingdom: AC 220 – 240 V

This plug will fit only into a grounded power outlet. If you are unable to insert the plug into the outlet, contact your electrician to install the proper outlet. Do not defeat the safety purpose of the grounded plug.

- This product should be operated only with the type of power source indicated on the label. If you are not sure of the type of power supply of your home, consult your product dealer or local electric power company.

Warning:

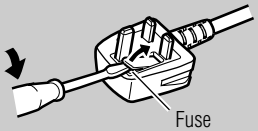
- Do not use the same power cord for AC 120 V as for AC 220 – 240 V. Doing so may cause malfunction, electric shock or fire.

Note for United Kingdom power cord only

The plug of United Kingdom power cord has a built-in fuse. When replacing the fuse, be sure to use only a correctly rated approved type, re-fit the fuse cover. (Consult your dealer or qualified personnel.)

How to replace the fuse

Open the fuse compartment with the blade screwdriver, and replace the fuse.



- Before connecting other products such as VCR's and personal computers, you should turn off the power of this product for protection against electric shock.
- Do not use attachments not recommended by the manufacturer as they may be hazardous.
- **When replacement parts are required,** be sure the service technician has used replacement parts specified by the manufacturer or equivalents. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- **Upon completion of any service or repairs to this product,** ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Under the following conditions,

1. **Turn off the power.**
2. **Unplug this product from the wall outlet.**
3. **Refer service to qualified service personnel.**

a) When the product emits smoke or unusual smell.
b) When the product exhibits a distinct change in performance—for example, no picture or no sound.
c) If liquid has been spilled, or objects have fallen on the product.
d) If the product has been exposed to rain or water.
e) If the product has been dropped or damaged in any way.
f) When the power supply cord or plug is damaged.

- Do not install this product in the following places:
  – in a damp or dusty room
  – where the product is exposed to soot or steam, such as near the cooking counter or a humidifier
  – near heat sources
  – where condensation easily occurs, such as near the window
- Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product.
  The product should be mounted according to the manufacturer's instructions, and should use a mount recommended by the manufacturer.
- Do not use this product near water.
- Be sure to install the product in the place where proper temperature and humidity are kept (☞ "Operating conditions" on page 29).
  This product becomes hot during its use. Take enough care when handling the product.

Do not use the product for a long time if the sound is distorted.

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltages and other hazards. Refer all service to qualified service personnel.

- Make enough room for inserting or removing the power plug. Place the product as close to an AC outlet as possible. The main power supply for the product is controlled by inserting or removing the power plug.
- When you install the product in a place where you cannot easily insert or remove the power plug from an AC outlet, insert or remove the power cord from the AC inlet on the product.
- When the product is left unattended and unused for a long period of time, unplug it from the wall outlet and disconnect the cable system.
- Do not overload wall outlets, extension cords, or convenience receptacles on other equipment as this can result in a risk of fire or electric shock.
- Use only the accessory cord designed for this product to prevent shock.

- Slots and openings in the cabinet are provided for ventilation. These ensure reliable operation of the product and protect it from overheating. These openings must not be blocked or covered.
- Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-circuit the parts, which could result in a fire or electric shock.
- Never spill liquid of any kind on the product.
- Never place anything on the product. (Placing liquids, naked flames, cloths, paper, etc. on the product may cause a fire.)
- Do not apply any strong shock to the LCD panel. (Do not hit any object against it or push it with a sharp-pointed tool.)
- Do not put heavy objects on the product.
- Do not step on or hang on the product.

U.S.A. only

FCC NOTICE (U.S.A. only)
CAUTION: Changes or modifications not approved by JVC could void the user's authority to operate the equipment.
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

IMPORTANT RECYCLING INFORMATION
This product has a fluorescent lamp that contains mercury. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information, please contact your local authorities or for USA, the Electronic Industries Alliance: http://www.eiae.org

European Union only

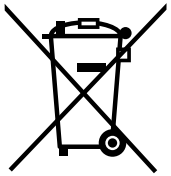
Dear Customer,

This apparatus is in conformance with the valid European directives and standards regarding electromagnetic compatibility and electrical safety.

European representative of Victor Company of Japan, Limited is:
JVC Technical Services Europe GmbH
Postfach 10 05 04
61145 Friedberg
Germany

Information for Users on Disposal of Old Equipment and Batteries

Products



Battery

Notice:
The sign Pb below the symbol for batteries indicates that this battery contains lead.

[European Union]

These symbols indicate that the electrical and electronic equipment and the battery with this symbol should not be disposed of as general household waste at its end-of-life. Instead, the products should be handed over to the applicable collection points for the recycling of electrical and electronic equipment as well as batteries for proper treatment, recovery and recycling in accordance with your national legislation and the Directive 2002/96/EC and 2006/66/EC.

By disposing of these products correctly, you will help to conserve natural resources and will help to prevent potential negative effects on the environment and human health which could otherwise be caused by inappropriate waste handling of these products.

For more information about collection points and recycling of these products, please contact your local municipal office, your household waste disposal service or the shop where you purchased the product.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

[Business users]
If you wish to dispose of this product, please visit our web page www.jvc-europe.com to obtain information about the take-back of the product.

[Other Countries outside the European Union]
These symbols are only valid in the European Union.
If you wish to dispose of these items, please do so in accordance with applicable national legislation or other rules in your country for the treatment of old electrical and electronic equipment and batteries.

Maintenance

Unplug this product from the wall outlet before cleaning.

Screen

To avoid irreparable change in appearance of the screen such as uneven color, discoloration, scratches, be careful about the following:
- Do not paste or stick anything using any glues or adhesive tapes.
- Do not write anything on the screen.
- Do not strike the screen with a hard object.
- Avoid condensation on the screen.
- Do not wipe the screen with solvent such as alcohol, thinner, or benzine.
- Do not wipe the screen forcefully.

If the screen gets stained, wipe it with a soft dry cloth, a soft damp cloth, or a soft cloth soaked in water-diluted neutral detergent and wrung well.

Cabinet

To avoid the deterioration or damages of the cabinet such as its paint's peeling away, be careful about the following:
- Do not wipe the cabinet using solvent such as alcohol, thinner, or benzine.
- Do not expose the cabinet to any volatile substance such as insecticides.
- Do not allow any rubber or plastic in contact for a long time.
- Do not wipe the cabinet forcefully.

Wipe stains off the cabinet with a soft cloth. If the cabinet gets heavily stained, wipe it with a soft cloth soaked in water-diluted neutral detergent and wrung well, then wipe with a soft dry cloth.

Ventilation openings

Use a vacuum cleaner to get rid of the dust around the intakes (all the openings). If a vacuum cleaner is not available, use a cloth and wipe it off. Leaving the dust around the intakes may prevent proper temperature control and cause damage to the product.

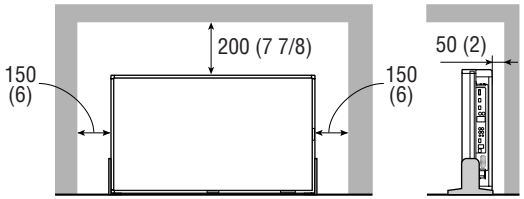
Installation

Precautions

- When installing the monitor on the wall, consult your dealer.
- Route the power cord and connection cables along the floor corners to avoid walking on them.
- For good heat dissipation, try to leave the following distance of space (minimum) around the monitor (see diagram below).
- When installing the monitor near the ceiling or similar location, the remote control may not work correctly because of possible effects, such as reflections, from the surroundings. If this happens, move the monitor where it is free from these effects.
- The ambient temperature of the installation place should be within the range of 0°C to 40°C (32°F to 104°F) (slightly variable depending on the ambient conditions of the installation place).
- Do not install the monitor in such a way that the monitor and other AV equipment affect each other adversely. (For example, if a disturbed image or noise due to electromagnetic interference occurs, or if the infrared remote control malfunctions, change the installation place.)
- Do not install the monitor in such a way that the ventilation holes of the internal cooling fans are blocked. Blocking the holes may cause high inside temperature and may damage the unit.

When installing the monitor on the supplied stand

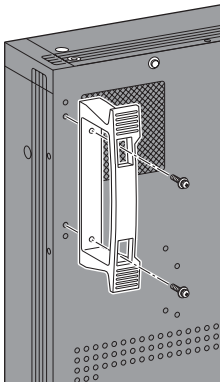
Front view Side view



Unit: mm (inch)

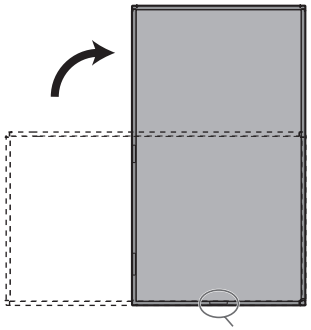
You can detach the handles as illustrated below.

- Place the screws into their original holes.



When installing the monitor vertically

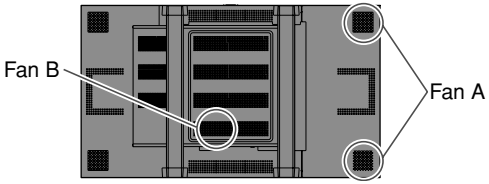
- Make sure to install the monitor in the direction illustrated below.
- Set the speed of the internal cooling fan to "HIGH" (see "COOLING MODE" on page 16).
- You can change the position of the JVC logo plate. Remove the sealing sticker on the place for the logo plate and fix the plate with the screws.



Place for the logo plate

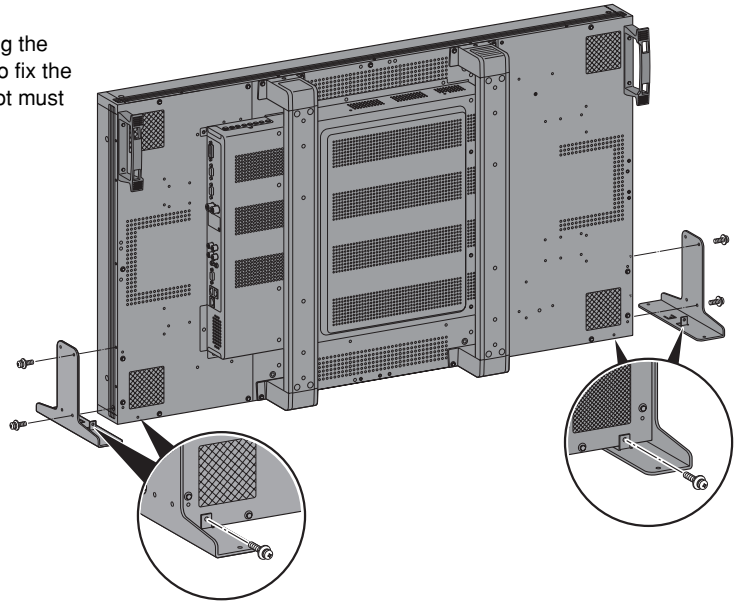
Position of the internal cooling fans

- Fan A stops when you set the speed of the fans to "LOW" (see "COOLING MODE" on page 16).
- Fan B is always in operation while the power is on.



How to attach the stand

Fix the stands as illustrated using the supplied screws. Take care not to fix the stands to the wrong side (the foot must face inside).

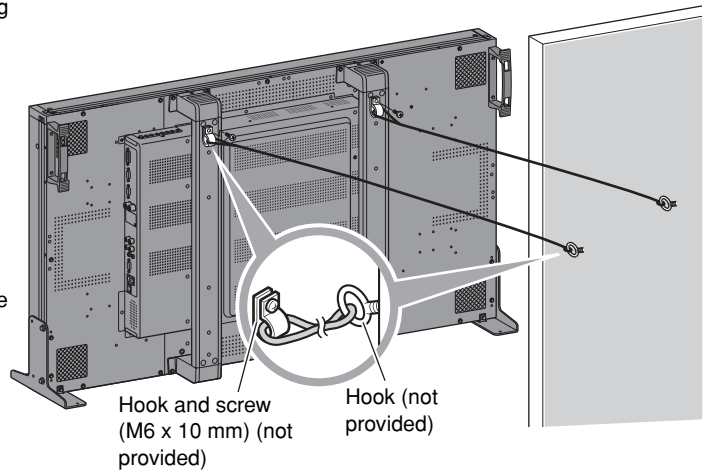


To prevent an accidental fall

Fix the monitor to a wall by using strings.

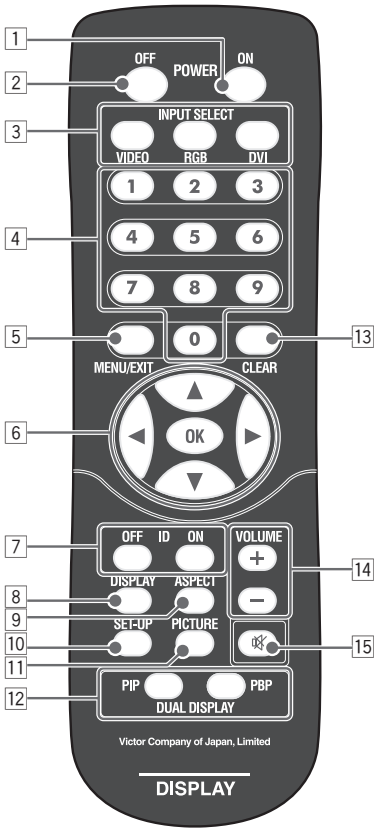
Fixing the monitor

Attach the hook (not provided) to the rear panel using M6 x 10 mm screws (not provided). Bind the hooks on the rear panel of the monitor to a wall or a pillar using durable string.
The holes on the base of the stand are also available to fix the monitor on the platform such as a table using screws (M6).



Parts Identification

Remote control



1 **POWER ON button**
Turns on the monitor.

2 **POWER OFF button**
Turns off the monitor (on standby).

3 **INPUT SELECT buttons** (see page 10)
Select the input.

4 **Number buttons**

5 **MENU/EXIT button** (see page 12)
- Displays the main menu.
- Exits the menu operation.

6 **▲▼◄ ► buttons** (see page 12)
Selects or adjusts the items on the menu.
OK button (see pages 11, 17)
Confirm the numbers entered.

7 **ID buttons** (see page 11)
Activates/deactivates the ID control of the monitor.

8 **DISPLAY button** (see page 11)
Displays the information of the current input.

9 **ASPECT button** (see page 10)
Changes the aspect ratio.

10 **SET-UP button** (see page 12)
Displays the set-up menu.

11 **PICTURE button** (see page 11)
Changes the picture mode.

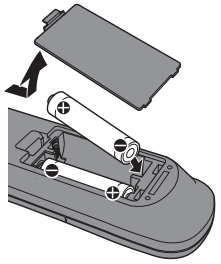
12 **DUAL DISPLAY buttons** (see page 11)
Activates/deactivates display using dual-monitor.

13 **CLEAR button** (see page 17)
Cancels the numbers entered.

14 **VOLUME +/– buttons**
Adjusts the volume level.

15 **Muting button** (see page 10)
Turns off the volume immediately.

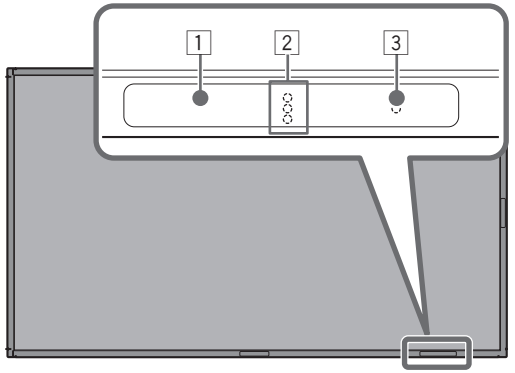
Inserting the batteries
Use two AA/R6 dry cell batteries.
Insert the batteries from the ⊖ end, making sure the ⊕ and ⊖ polarities are correct.
- Follow the warnings printed on the batteries.
- Battery life is about six months to one year, depending on how much you use the remote control.
- The batteries we supply are only for setting up and testing your monitor, please replace them as soon as you need to.
- If the remote control does not work properly, replace the batteries.

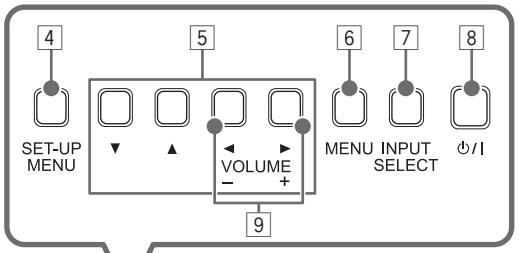


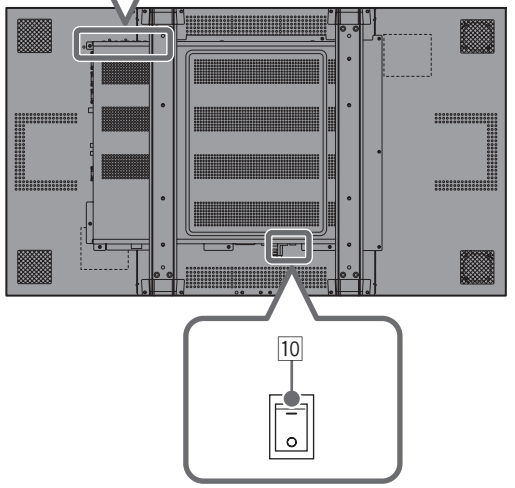
• **See page 29 for checking the accessory included with the monitor.**

Monitor

Front panel







Rear panel

1 **Remote sensor**
Aim the remote control toward the sensor.

2 **Self-diagnostic lamps** (see page 28)
Light or flash when a malfunction occurs on the monitor.

3 **Power lamp**
Off: main power is turned off.
Green: power is on.
Orange: power is off (on standby).

4 **SET-UP MENU button** (see page 15)
Displays the set-up menu.

5 **▲▼◄ ► buttons** (see page 12)
Selects or adjusts the items on the menu.

6 **MENU button** (see page 12)
- Displays the main menu.
- Exits the menu operation.

7 **INPUT SELECT buttons** (see page 10)
Selects the input.

8 **⏻ / ❙ button** (see page 10)
Turns on/off the monitor.

9 **VOLUME +/– buttons** (see page 10)
Adjusts the volume level.

10 **POWER (main power) switch**
❙ : Main power on (You can turn on/off the monitor by using ⏻ / ❙ button on the monitor or POWER ON/OFF buttons on the remote control.)
○: Main power off

The illustration of the monitor used for explanation in this manual is of GM-F470S.

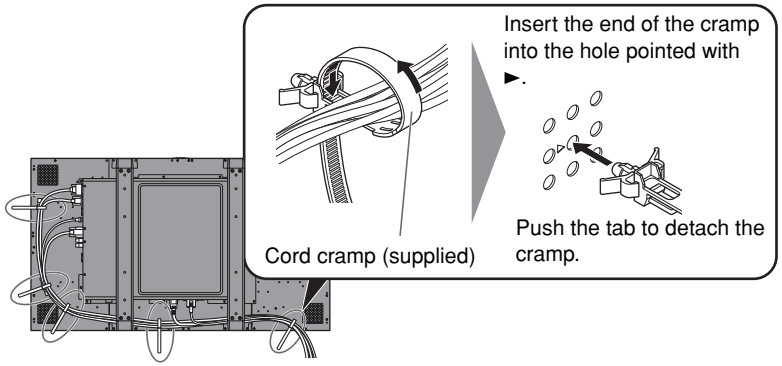
Connections

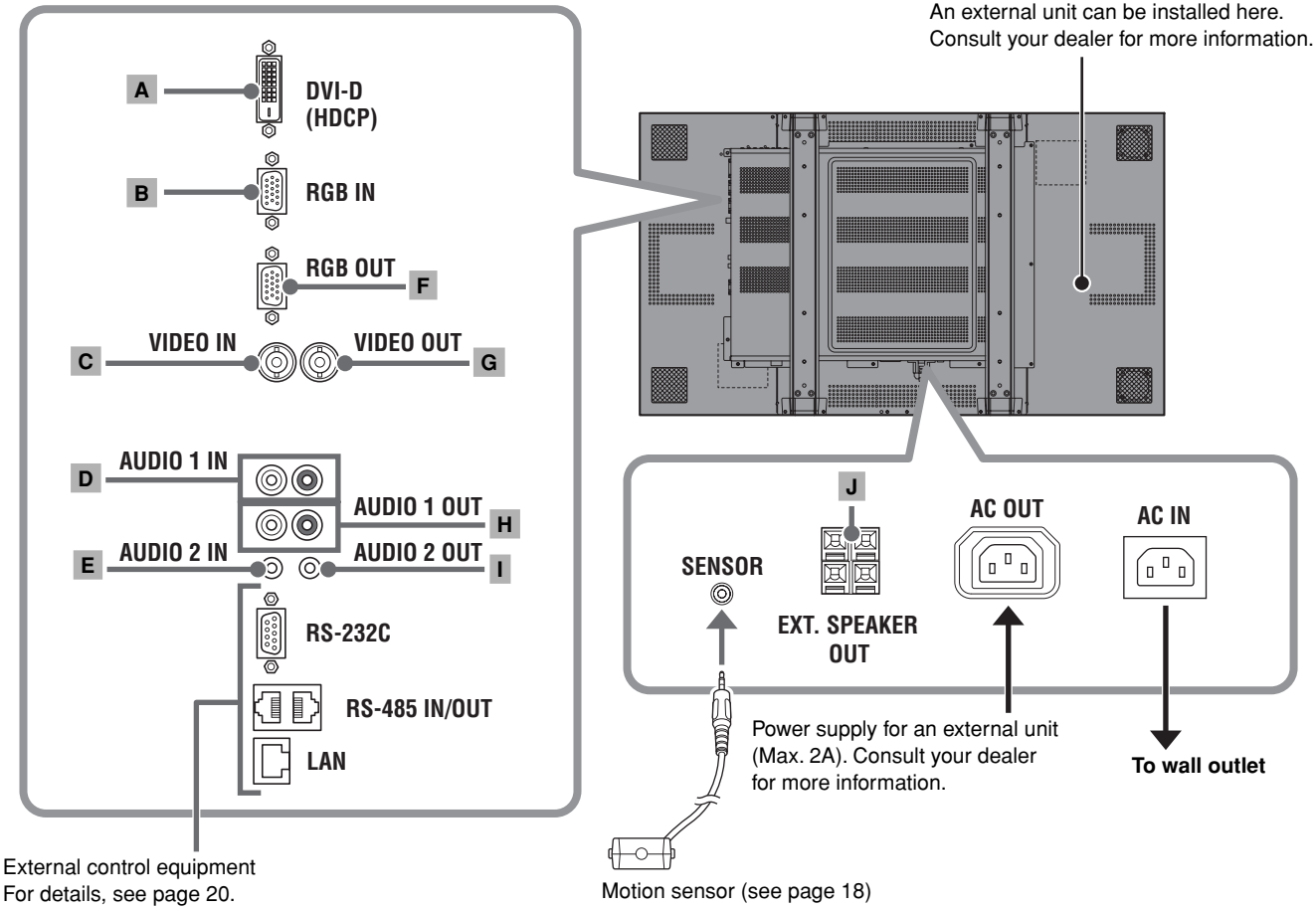
Select the most appropriate terminal referring to the illustration below and the tables on page 7 when connecting equipment to the terminals **A** - **J**.

CAUTION

- *Before making any connections, turn off all the equipment.*
- *DO NOT connect the power cord until all connections are completed.*
- *Refer also to the user manual of each piece of equipment.*
- *Do not short-circuit ⊕ and ⊖ speaker cords to each other. (Refer also to the instructions supplied with the speakers.)*

To bind the cables (example):

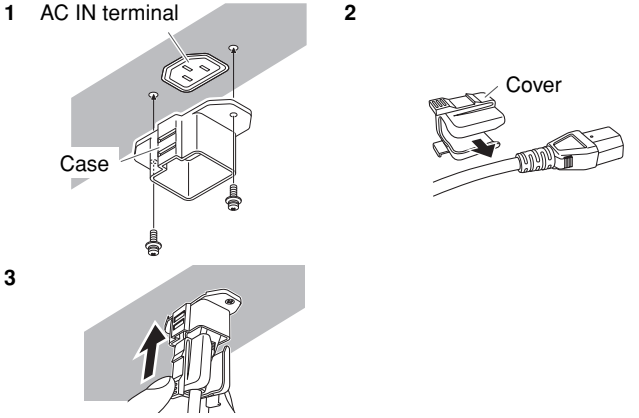




Attaching the power cord holder

The provided power cord holder prevents accidental disconnection of the AC power cord from the AC IN terminal.

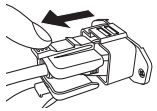
- The power cord holder consists of two parts, a case and a cover.



CAUTION

- *Use only the provided screws.*
- *Make sure the plug will not be pulled out after the cover is attached to the case.*

To detach the cover



• **See page 8 and 9 for the available signal formats and the pin assignment of the DVI-D and D-sub 15-pin terminals.**

Video input terminals

	Input terminals on the monitor		Connecting cables	Output terminals on external equipment	Notes
A	**DVI**	**DVI-D (HDCP) IN**	DVI cable	DVI output	Compatible with HDCP. When the picture is not displayed correctly, change the setting of "DVI MODE" (see page 13).
B	**RGB**	**RGB IN**	D-sub 15-pin cable	RGB output	
C	**VIDEO**	**VIDEO IN**	BNC cable	Video output	Since the IN terminal and OUT terminal are loop-through terminals, the devices connected to the OUT terminal should be correctly terminated. Otherwise, pictures become abnormally bright or the display screen gets affected abnormally.

Audio input terminals

	Input terminals on the monitor		Connecting cables	Output terminals on external equipment	Notes
D	**AUDIO 1**	**AUDIO 1 IN**	Audio cable	Audio output (pin jack)	Set "AUDIO ASSIGN" according to your connection (see page 13).
E	**AUDIO 2**	**AUDIO 2 IN**	Stereo mini plug cable	Audio output (stereo mini jack)	

Video output terminals

	Output terminals on the monitor	Connecting cables	Input terminals on external equipment	Notes
F	**RGB OUT**	D-sub 15-pin cable	RGB input	Buffer output is used for RGB signal.
G	**VIDEO OUT**	BNC cable	Video input	Since the IN terminal and OUT terminal are loop-through terminals, the devices connected to the OUT terminal should be correctly terminated. Otherwise, pictures become abnormally bright or the display screen gets affected abnormally.

Audio output terminals

	Output terminals on the monitor	Connecting cables	Input terminals on external equipment	Notes
H	**AUDIO 1 OUT**	Audio cable	Audio input (pin jack)	The IN terminal and OUT terminal are loop-through terminals.
I	**AUDIO 2 OUT**	Stereo mini plug cable	Audio input (stereo mini jack)	
J	**EXT. SPEAKER OUT**	Speaker cord	Speaker terminal	When using the external speakers, set "SPEAKER SELECT" on the main menu to "EXT (external)" (see page 13). Use the speakers with the following specification: Impedance: Between 6 Ω and 8 Ω Power handling capacity: More than 7 W

Available signals

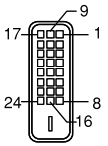
The following signals can be input to this monitor.

Video signals

√ : Acceptable / —: Not acceptable

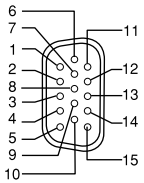
Signal name	Frequency		Input terminal			Notes
	Horizontal (kHz)	Vertical (Hz)	VIDEO	RGB	DVI-D	
NTSC 3.58	15.734	59.94	√	—	—	
PAL-M	15.734	59.94	√	—	—	
PAL	15.625	50.00	√	—	—	
PAL-N	15.625	50.00	√	—	—	
SECAM	15.625	50.00	√	—	—	
BW/60	15.734	59.94	√	—	—	
BW/50	15.625	50.00	√	—	—	
480/60i	15.734	59.94	—	√	—	
576/50i	15.625	50.00	—	√	—	
480/60i (pixel repetition)	15.734	59.94	—	—	△	This signal may not be displayed when input from a computer or some devices.
576/50i (pixel repetition)	15.625	50.00	—	—	△	
480/60p	31.489	59.94	—	√	△	
576/60p	31.250	50.00	—	√	△	
640*480/60p	31.469	59.94	—	—	△	
720/60p	31.469	59.94	—	—	√	
720/50p	22.478	29.97	—	—	√	
1080/60i	33.716	59.94	—	√	△	This signal may not be displayed when input from a computer or some devices.
1080/50i	28.125	50.00	—	√	△	
1080/60p	67.433	59.94	—	√	√	
1080/50p	56.250	50.00	—	√	√	

Specifications of the DVI-D (HDCP) terminal



Pin No.	Signal name	Pin No.	Signal name	Pin No.	Signal name
1	T.M.D.S Data 2–	**9**	T.M.D.S Data 1–	**17**	T.M.D.S Data 0–
2	T.M.D.S Data 2+	**10**	T.M.D.S Data 1+	**18**	T.M.D.S Data 0+
3	T.M.D.S Data 2/4 shield	**11**	T.M.D.S Data 1/3 shield	**19**	T.M.D.S Data 0/5 shield
4	NC	**12**	NC	**20**	NC
5	NC	**13**	NC	**21**	NC
6	DDC Clock	**14**	+5 V Power	**22**	T.M.D.S Clock shield
7	DDC Data	**15**	GND	**23**	T.M.D.S Clock+
8	NC	**16**	Hot Plug Detect	**24**	T.M.D.S Clock–

Specifications of the RGB IN terminal



Pin No.	Signal name	Pin No.	Signal name
1	Red	9	+5 V
2	Green	10	GND
3	Blue	11	GND
4	—	12	DDC Data
5	GND	13	HD
6	GND	14	VD
7	GND	15	DDC Clock
8	GND	External	GND

Computer signals

- When analog RGB signals are input, part of the picture may not be displayed or an unnecessary picture may appear in the following cases. If this happens, apply “AUTO ADJUST” or adjust “SIZE” and “POSITION” in the “SIZE SETTING” menu (see page 13).

– When a signal other than those listed below is input
– When the horizontal/vertical frequency of the signal is different though its resolution is the same as that of the signals listed below
– When the resolution of the signal output from the personal computer is different from that set for the personal computer’s display.

- Any signal other than those listed below may not be displayed normally although it’s frequency is within the acceptable range.
- Depending on the connected equipment, the monitor may not be compatible with G on sync signals.
- When a preset mode signal is input, the signal format is displayed on the screen.
- The sub window in the Dual Display mode (see page 11) is not compatible with G on sync signals.

√ : Acceptable / —: Not acceptable

Signal name	Screen resolution		Frequency		Input terminal		Notes
	Horizontal	Vertical	Horizontal (kHz)	Vertical (Hz)	RGB	DVI-D	
640*400@56Hz (VGA400/56)	640	400	24.823	56.42	√	—	
640*400@70Hz (VGA400/70)	640	400	31.475	70.10	√	—	
640*480@60Hz (VGA/60)	480	640	59.94	31.469	√	√	
640*480@72Hz (VGA/72)	640	480	37.861	72.81	√	—	
852*480@60Hz (WideVGA/60)	852	480	31.469	59.94	√	√	
800*600@60Hz (SVGA/60)	800	600	37.879	60.32	√	√	
1024*768@60Hz (XGA/60)	1024	768	48.363	60.00	√	√	
1024*768@70Hz (XGA/70)	1024	768	56.476	70.07	√	—	
1024*768@75Hz (XGA/75)	1024	768	60.023	75.03	√	—	
1024*768@85Hz (XGA/85)	1024	768	68.667	85.00	√	—	
1280*720@60Hz (WideXGA/60)	1280	720	44.820	60.00	√	√	Set “WIDE XGA” to “1280” on the main menu (see page 13).
1280*768@60Hz (WideXGA/60)	1280	768	47.760	60.00	√	√	
1360*768@60Hz (WideXGA/60)	1360	768	47.712	60.02	√	√	Set “WIDE XGA” to “1366” on the main menu (see page 13).
1366*768@60Hz (WideXGA/60)	1366	768	48.363	60.00	√	√	
1152*864@75Hz (XGA+/75)	1152	864	67.500	75.00	√	—	
1280*1024@60Hz (SXGA/60)	1280	1024	63.981	60.02	√	√	Set “SXGA/SXGA+” to “SXGA” on the main menu (see page 13).
1400*1050@60Hz (SXGA+/60-A)	1400	1050	63.981	60.02	√	√	Set “SXGA/SXGA+” to “SXGA+” on the main menu (see page 13).
1400*1050@60Hz (SXGA+/60-B)	1400	1050	65.220	60.00	√	√	
1600*1200@60Hz (UXGA/60)	1600	1200	75.000	60.00	√	√	

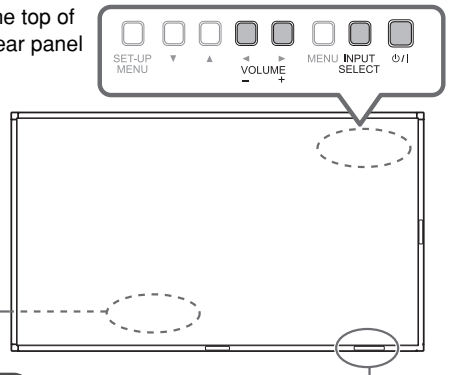
Daily Operations

Turning on the main power

| : Main power on
○: Main power off

On the bottom of the rear panel

On the top of the rear panel



Turning on the monitor

ON

- To turn off the monitor, press POWER OFF.

OFF

On the main unit:

Each time you press the button, the power turns on and off.

⏻/|

Selecting an input

INPUT SELECT
VIDEO RGB DVI

On the main unit:

Each time you press the button, the input changes.

INPUT SELECT

Adjusting the volume

VOLUME + −

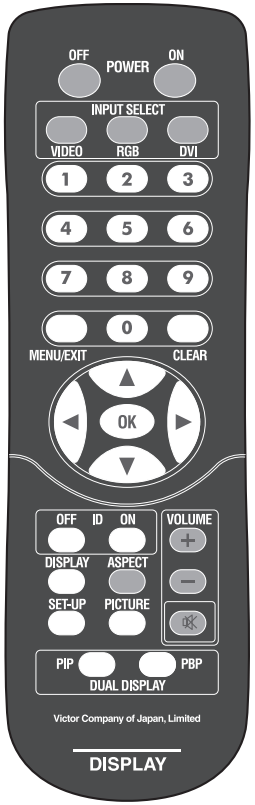
On the main unit:

◄ ►
VOLUME
− +

To turn off the volume immediately:

- Pressing the button again resumes the previous volume level.
- Muting can also be activated on the main menu (see “AUDIO SETTING” on page 13).

Remote control only



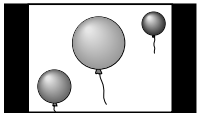
• When the Control Lock is set to “ON” (see page 16), you cannot use the buttons on the main unit.
• When the Security Lock is set to “ON” (see page 17), a password entry screen of the set-up menu appears at turning on the power. Enter the correct password before starting operations.

Changing the aspect ratio

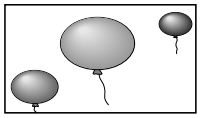
ASPECT

Each time you press the button, the aspect ratio changes as follows:

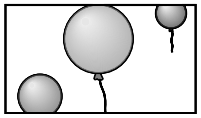
REGULAR
Displays at conventional 4:3 aspect ratio.



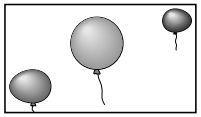
FULL
Enlarges the picture of 4:3 aspect ratio horizontally.
- For the picture of 16:9 aspect ratio, the aspect ratio is not changed.



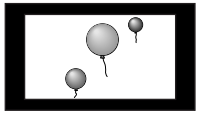
ZOOM
Enlarges the picture of 4:3 aspect ratio vertically and horizontally at the same ratio.



PANORAMIC
Enlarges the picture of 4:3 aspect ratio horizontally to the extent that the picture does not look abnormal.



REAL DOT
Displays the original picture input at the center without zooming.
This item is not available when UXGA (1600x1200) signal is input.



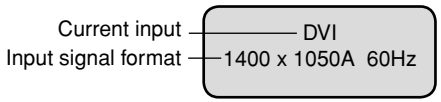
NOTE

- *For some signals, the aspect ratio cannot be changed or some modes cannot be selected.*
- *While the Multi Display is in use (see page 14), the aspect ratio is fixed to “FULL.”*
- *The aspect ratio can also be changed on the main menu (see “SIZE SETTING” on page 13).*

Displaying the current status

DISPLAY

The information of the current input is displayed.



NOTE

- *When no signal is input, "NO SYNC" appears. When a signal this monitor does not support is input, "Out of range" appears.*
- *When "STATUS DISPLAY" on the set-up menu is set to "AUTO" (see page 15), the status is also displayed in the following cases:*
  - *– When you turn on the monitor*
  - *– When you change inputs*
  - *– When you change signal types.*

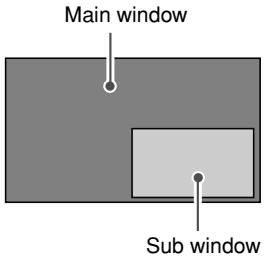
Activating the Dual Display

PIP PBP

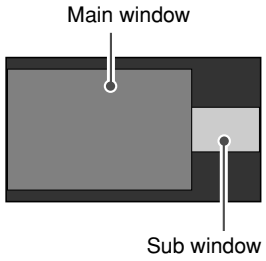
DUAL DISPLAY

You can view two Inputs at the same time—Dual Display.

PIP (Picture In Picture) mode



PBP (Picture By Picture) mode



- Each time you press the buttons, the Dual Display turns on or off.
- When the Dual Display is activated, the current input is displayed on the main window. Select the input for the sub window* on "DUAL DISPLAY" of "FUNCTION SETTING" (see page 14).
- The audio signals for the main window are emitted from the speaker.
- To turn off the Dual Display, press the same button again.

** You cannot select the same input as that of the main window and DVI input for the sub window.*

NOTE

- *Use the main menu to adjust position and/or size of the sub window (see "DUAL DISPLAY" on page 14).*

Controlling only the monitor with specified ID

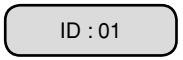
OFF ID ON

When using several monitors at once, you can control only a desired monitor by specifying its ID.

- To assign the ID, see "ID" on page 14.

To select the ID of the monitor to control

1 **Press ID ON.**
ID of each monitor is displayed.



2 **Press number buttons to enter the desired ID.**

3 **Press OK.**
Now you can control only the monitor with the ID you have specified.

To control a monitor with another ID, cancel the ID control, then perform the procedure above.

To cancel the ID control, press ID OFF.

Selecting the picture mode

PICTURE

Each time you press the button, the picture mode changes.

DYNAMIC: Suitable for displaying documents for presentation.

NORMAL: Displays the original picture.

USER: You can adjust picture quality as you like (see "PICTURE SETTING" on page 13).

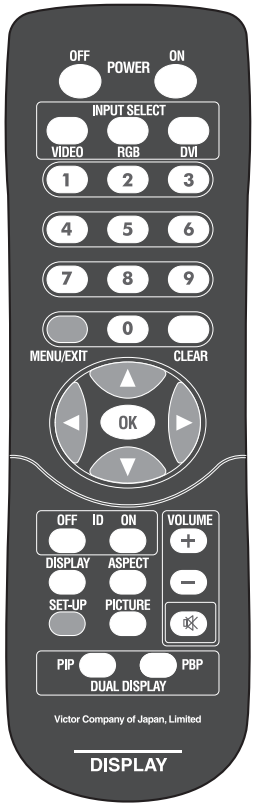
NOTE

- *The picture mode is stored for each input.*
- *You can adjust the picture quality, such as brightness, for each picture mode. The setting you have made is stored (see "PICTURE SETTING" on page 13).*
- *When the Multi Display (see page 14) or the Dual Display (see the left) is in use, the picture mode cannot be changed.*

Menu Operation

On the main menu and set-up menu, you can make various adjustments, such as picture quality.
- For the configuration of the main menu and a detailed description of each item, see page 13.
- For the configuration of the set-up menu and a detailed description of each item, see page 15.
- Functions not available for the current input signal cannot be selected.
- The main menu and set-up menu disappear automatically in about 30 seconds after the last operation.

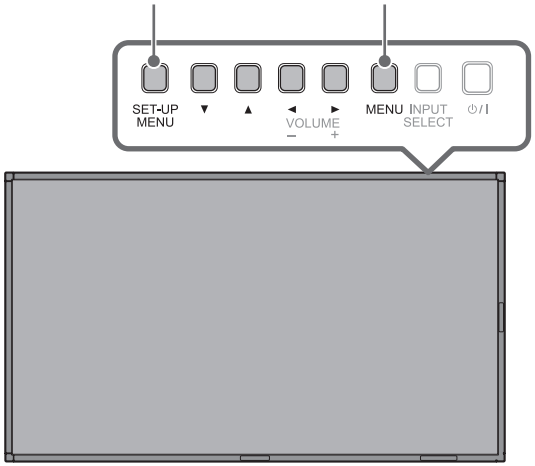
From the remote control



On the monitor

Works in the same way as SET-UP on the remote control.

Works in the same way as MENU/EXIT on the remote control.



1 Display the menu.

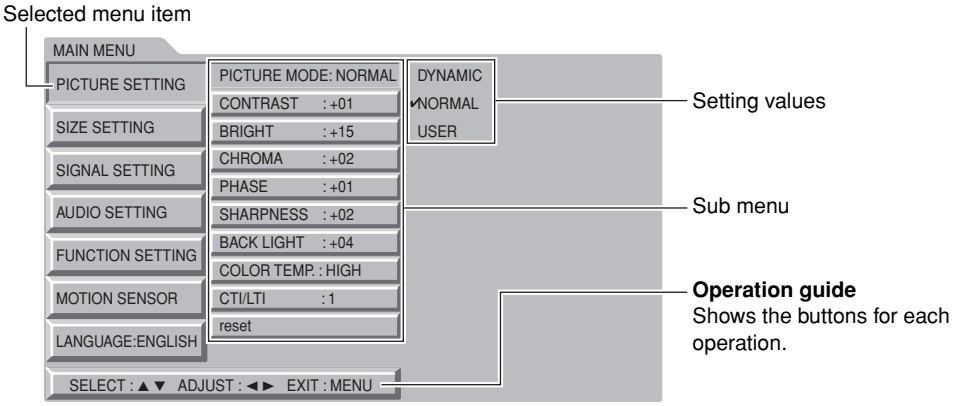
To display the main menu, press MENU/EXIT.

To display the set-up menu, press SET-UP.

2 Select an item by pressing ▲ ▼ , then press ►.

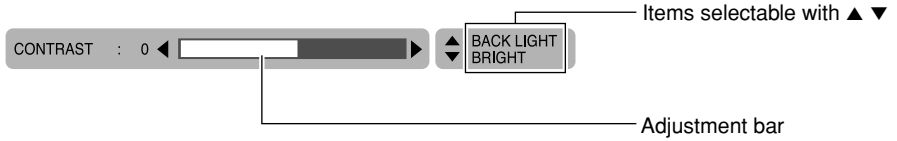
The sub menu appears.

Ex.: When “PICTURE SETTING” in the main menu is selected

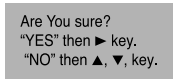


3 Select an item in the sub menu by pressing ▲ ▼, then press ◄ ► to adjust it.

When appearing the indication below on the bottom of the screen, press ◄ ► to adjust the item. Pressing ▲ ▼ changes the item to adjust.



When appearing the message below, press ► to confirm the adjustment. Press ▲ ▼ to cancel it.



- You can return to the previous menu by pressing MENU/EXIT.

4 Exit from the menu operation by pressing MENU/EXIT repeatedly.

Menu Configuration—MAIN MENU

PICTURE SETTING

Item	To do	Setting value
PICTURE MODE	Select a picture mode (see “Selecting the picture mode” on page 11).	DYNAMIC, NORMAL, USER
CONTRAST	Adjust contrast of the picture.	–20 ←→ 00 ←→ +20
BRIGHT	Adjust the brightness of the picture.	–20 ←→ 00 ←→ +20
CHROMA	Adjust the color density of the picture (except for RGB and BW (50 Hz/60 Hz) signals).	–20 ←→ 00 ←→ +20
PHASE	Adjust the color phase.	–20 ←→ 00 ←→ +20
SHARPNESS	Adjust the outlines of the picture.	–20 ←→ 00 ←→ +20
BACK LIGHT	Adjust the brightness of the backlight.	–20 ←→ 00 ←→ +20
COLOR TEMP.	Select the color temperature.	HIGH, MID, LOW, USER
CTI/LTI	Adjust the clearness of the picture when VIDEO is selected for the input.	OFF, 1(clear), 2(clearer)
reset	Restore the default setting for all the items in “PICTURE SETTING.” • The “PICTURE MODE” setting will not be reset.	

- The Picture mode is stored for each input. In addition, you can adjust other items in “PICTURE SETTING” for each picture mode and the setting values are stored.
- “CHROMA“ and “PHASE” is not available for the following input signals:
  – RGB, PAL, SECAM, BW (50 Hz/60 Hz)
- You can make the detailed settings of the color temperature using the set-up menu (see “COLOR TEMP.” on page 15).

SIZE SETTING

Item	To do	Setting value
AUTO ADJUST	Adjust pictures of analog RGB signals automatically. Perform this adjustment when a picture from analog RGB signals is not properly positioned.	
H SIZE	Adjust the horizontal picture size.	Adjustable range changes automatically.
H POSITION	Adjust the horizontal picture position.	
V SIZE	Adjust the vertical picture size.	
V POSITION	Adjust the vertical picture position.	
DOT CLOCK	Adjust to eliminate stripes or flickering when analog RGB signals are being input from a computer. Use with “CLOCK PHASE.”	Adjustable range changes automatically.
CLOCK PHASE	Adjust to eliminate stripes or flickering when analog RGB signals are being input from a computer. Use with “DOT CLOCK.”	–32 ←→ 00 ←→ +32
ASPECT	Select the aspect ratio (see “Changing the aspect ratio” on page 10).	REGULAR, FULL, ZOOM, PANORAMIC, REAL DOT
reset	Restore the default setting for all the items in “SIZE SETTING.”	

- During the size and position adjustments, the picture may be distorted but this is not a malfunction.
- Size and position settings limit each other and if one is set to a higher setting value, the other’s adjustable range may be reduced.
- For the computer signals input to the DVI-D terminal, “DOT CLOCK” and “CLOCK PHASE” are automatically adjusted.
- “AUTO ADJUST” may not function properly for pictures with a dark area around it.

SIGNAL SETTING

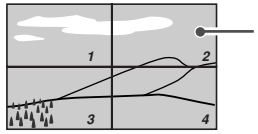
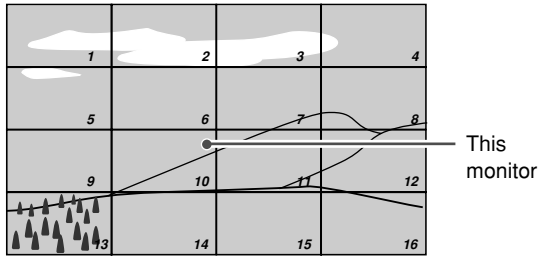
Item	To do	Setting value
DVI MODE	When “AUTO” is selected, the format of signals come in to the DVI-D (HDCP) terminal is automatically recognized. (Normally, select “AUTO.”) • Select “VIDEO” or “PC” when the picture is not displayed correctly with “AUTO.”	AUTO, VIDEO, PC
STD/WIDE	Select “STD” when VGA60 or XGA60 signal is input through the RGB IN terminal, and “WIDE” when WVGA60 or WXGA60 signal is input through the RGB IN terminal. (This item does not affect other signals.)	STD, WIDE
WIDE XGA	Select the format of analog Wide XGA signal. (Select “1366” when the aspect ratio is 1366 x 768 or 1360 x 768.)	1366, 1280
SXGA/SXGA+	Select “SXGA” when SXGA60 signal is input through the RGB IN terminal, and “SXGA+” when SXGA+60 or SXGA+60* signal is input through the RGB IN terminal. (This item does not affect other signals.)	SXGA, SXGA+
I/P MODE	Select a proper mode corresponding to the input picture.	MODE1, MODE2, MODE3
reset	Restore the default setting for all the items in “SIGNAL SETTING.”	

AUDIO SETTING

Item	To do	Setting value
SPEAKER SELECT	Select the speakers you want to use.	INT. (Internal speakers), EXT. (External speakers)
AUDIO ASSIGN	Select the audio input (AUDIO IN 1 or AUDIO IN 2 terminal) assigned to each video input.	
VIDEO	Select the audio input while VIDEO is selected for the input.	AUDIO1, AUDIO2, OFF (no sound)
RGB	Select the audio input while RGB is selected for the input.	
DVI	Select the audio input while DVI is selected for the input.	
MUTING	Turn the volume on or off.	ON, OFF
reset	Restore the default setting for all the items in “AUDIO SETTING.”	

Menu Configuration—MAIN MENU (cont.)

FUNCTION SETTING

Item	To do	Setting value
COLOR SYSTEM	Select the color system. When you cannot view pictures correctly with “AUTO,” select an appropriate option according to the current input.	AUTO, NTSC, PAL, SECAM, PAL M, PAL N
MULTI DISPLAY	Set the multiple monitor usage—Multi Display. • See also “Example of the Multi Display setting” below.	
MULTI SIZE	Turn on/off the Multi Display. Select the number and layout (horizontal * vertical) of the monitors to use. **Example of the Multi Display setting** When “MULTI SIZE” is set to “2*2” and ”MULTI POSI.” is set to “2.”  When “MULTI SIZE” is set to “4*4” and ”MULTI POSI.” is set to “10.”  	OFF 2*2 3*3 4*4 5*5 1*2 1*3 1*4 1*5 2*1 3*1 4*1 5*1
MULTI POSI.	Set the position of this monitor when the Multi Display is in use.	1 ←→ 25
SEAMLESS	Hide the marginal areas of the pictures on the monitors to make the whole image looks seamless.	ON, OFF
reset	Restore the default setting for “MULTI DISPLAY.”	

Item	To do	Setting value
DUAL DISPLAY	Set the Dual Display (see “Activating the Dual Display” on page 11).	
MODE	Select the Dual Display mode.	OFF, PIP, PBP
MAIN WINDOW	Select the input for the main window.	VIDEO, RGB, DVI
SUB. WINDOW	Select the input for the sub window.	VIDEO, RGB
SIZE	Adjust the size of the sub window (only for PIP mode).	SMALL-2, SMALL-1, LARGE-1, LARGE-2
H POSITION/ V POSITION	Adjust the horizontal and vertical position of the sub window (only for PIP mode).	–20 ←→ 00 ←→ +20
SPLIT LINE	Adjust the position of the border between the main window and sub window (only for PBP mode).	1 ←→ 5
reset	Restore the default setting for “DUAL DISPLAY.”	
ECO SENSOR	Set the eco sensor which enables you to adjust the brightness of the screen automatically according to the brightness of the room.	ON, OFF
reset	Restore the default setting for the items in “FUNCTION SETTING.”	

- The Multi Display and Dual Display cannot be used at the same time.
- You cannot select the same input for both main window and sub window of the Dual Display.

MOTION SENSOR

Specifies the operation of the monitor when the motion sensor (supplied) detects the motion of human around the monitor.

- For details about the motion sensor and its setting, see page 18.

LANGUAGE

Selects the language for the main menu, set-up menu, and messages displayed on the monitor.

Setting value: ENGLISH, DEUTSCH, FRANÇAIS, ESPAÑOL, ITALIANO, РУССКИЙ

Menu Configuration—SET-UP MENU

COLOR TEMP.

Item	To do	Setting value
COLOR TEMP.	Display the color temperature.	
R DRIVE, G DRIVE, B DRIVE	Adjust the drive level of each color (red, green, and blue).	MIN ←→ 000 ←→ MAX (in 256 grades)
R CUT OFF, G CUT OFF, B CUT OFF	Adjust the cut-off point of each color (red, green, and blue).	MIN ←→ 000 ←→ MAX (in 256 grades)
reset	Restore the default setting for all the items in “COLOR TEMP.”	

- Adjust the color temperature after selecting color temperature (HIGH, MID, LOW, or USER) on the main menu (see “PICTURE SETTING” on page 13).

SYNC FUNCTION

Item	To do	Setting value
NO SYNC ACTION	Select the screen color or the screen status applied when no signal is coming in.	OFF, GRAY BACK (gray screen), POWER SAVE (power save), RED, GREEN, BLUE
DELAY TIME	Set the time to change the screen color/screen status set in “NO SYNC ACTION” above after signal-incoming stopped.	30sec., 5min., 15min.
reset	Restore the default setting for all the items in “SYNC FUNCTION.”	

- While the Dual Display is activated, the Sync Function works only for the main window.

REMOTE SYSTEM

Item	To do	Setting value
ID	Assign the ID to the monitor.	01 ←→ 25
REMOTE IN SEL.	Select the input terminal used for external control.	D-sub9 (RS-232C input), RJ-45 (RS-485 input/output), LAN (Ethernet terminal)
CNT. RJ45 OUT	Select the external control method for RS-485 OUT terminal.	RS485, IR OUT
CNT. RJ45 IN	Select the external control method for RS-485 IN terminal.	RS485, MAKE, TRIG., SET
PORT F1 – PORT F5	Assign the control function to the RS-485 IN terminal’s pins (1 to 5) when selecting “SET” in “CNT. RJ45 IN” above.	– – – (no function), VIDEO, RGB, DVI, POWER, ASPECT, MUTING, PIP, PBP
reset	Restore the default setting for all the items in “REMOTE SYSTEM.”	

- For details about external control, see pages 20 to 25.

INFORMATION

Item	To do	Setting value
STATUS DISPLAY	Set if you want the information of the current input to be displayed on the screen (see “Displaying the current status” on page 11).	AUTO, OFF
SUB HOUR METER	Display the hours of current use (unit: hour). You can reset only this item by pressing ►.	
reset	Restore the default setting for “STATUS DISPLAY” and “SUB HOUR METER.”	
MODEL	Display the model name and version of the monitor. This item is used for maintenance of the monitor.	
VERSION		
HOUR METER	Display the total hours of use (unit: hour). This item is used for maintenance of the monitor. This item cannot be reset.	

SECURITY LOCK

Item	To do	Setting value
SECURITY LOCK	Activate/deactivate the Security Lock.	ON, OFF
PASS ID SETTING	Set the password for the Security Lock.	4 numbers

- For details about the Security Lock, see page 17.

Menu Configuration—SET-UP MENU (cont.)

SCHEDULER

Item	To do	Setting value
PRESENT TIME	Adjust the clock. • For the setting procedure, see page 17.	
PROGRAM SET		
SUNDAY MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY	Set the Power-on/off Timer for each day. • For the setting procedure, see page 17.	
reset	Restore the default setting for “SCHEDULER.”	

NETWORK SETTING

Item	To do	Setting value
MAC ADDRESS	Display the MAC address of the monitor.	
IP ADDRESS	Make the network setting to control the monitor from the computer in the local area network. • For details, see page 23.	
SUBNET MASK		
DEFAULT GATEWAY		
DNS SERVER		
reset	Restore the default setting for all the items in “NETWORK SETTING.”	

CONTROL LOCK

Activates/deactivates the Control Lock. When this function is activated, you cannot operate the monitor with the buttons on the main unit.

Setting value: OFF, ON

• You can use the remote control and external control while the control lock is set. To release the lock, use the remote control or the SET-UP MENU button on the main unit.

REFRESH

Item	To do	Setting value
PIXEL SHIFT	Move picture displayed on the monitor in certain period.	OFF, ON
COLOR REVERSE	Reverse color of the picture displayed on the monitor.	OFF, ON
reset	Restore the default setting for all the items in “REFRESH.”	

POWER ON DELAY

Sets the time till the power supply to the monitor’s circuits starts after the power button (POWER ON button on the remote control or ⏻ / I button on the main unit) is pressed.
If you are going to turn several monitors on at the same time, it is recommended to apply different values to the monitors to control rush current.

Setting value: 0 – 25

• The delay time is about 5 seconds under the setting “25”.

SYNC TERM.

Sets the resistance of sync signal of the RGB IN terminal. Normally, select “HIGH”. If you see pictures flickering or blurring on the screen because of a long connecting cord, set this to “LOW”.

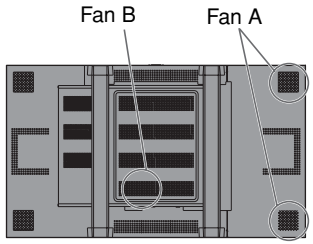
Setting value: HIGH, LOW

COOLING MODE

Sets the speed of the internal cooling fans. When installing the monitor vertically, select “HIGH.”

Setting value: LOW, HIGH

• Fan A stops when “LOW” is selected.
• Fan B is always in operation while the power is on.



reset

Restores the default setting for all the items in the set-up menu.

all reset

Restores the default setting for all the items in the main menu and set-up menu (except for “LANGUAGE,” “HOUR METER,” “SECURITY LOCK,” and “PASS ID SETTING”).

Setting the Security Lock

When the Security Lock is set to “ON”, a password entry screen of the set-up menu appears at at turning on the power. Enter the correct password before starting operations.

- Without entering the correct password, you cannot perform any operations except for entering the password and turning off the monitor.

To enter a password

- To enter a number: press a numerical button.
- To move to the next/previous digit: press ►/◄.
- To delete a number: press CLEAR.
- To confirm the entry: press OK.

To activate the Security Lock

1 Select “SECURITY LOCK (: OFF)” on the SECURITY LOCK sub menu of the set-up menu.

2 Press ►.

The password entering screen appears.

- When shipped from the factory, the password is set to “0000.” To change the password, see the right.

3 Enter the password.

The Security Lock is set to “ON.”

- If the Power-on Timer (see the right) is activated, the monitor turns on at the specified power-on time without the password.

DO NOT forget the password!
If you forget the password, consult your dealer.

To deactivate the Security Lock

1. **Select “SECURITY LOCK (: ON)” on the SECURITY LOCK sub menu of the set-up menu.**
2. **Press ►.**
   The password entering screen appears.
3. **Enter the password.**
   The Security Lock is set to “OFF.”

To change the password

1. **Select “PASS ID SETTING” on the SECURITY LOCK sub menu of the set-up menu.**
2. **Press ►.**
   The password entering screen appears.
3. **Enter the current password.**
4. **Enter a new password.**
5. **Press OK.**
   The cursor moves to the second line.
6. **Enter the new password again for confirmation, then press OK.**
   - If the password is different from the one entered in step 4, “PASS ID NG!” appears and the SECURITY LOCK sub menu is displayed. In this case, repeat from step 2.

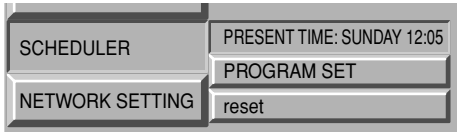
To finish the procedure, press MENU/EXIT repeatedly.

Using the timer

Setting the clock

Set the clock before using the Power-on/off Timer (see below).

1 Select “PRESENT TIME” on the SCHEDULER sub menu of the set-up menu.



2 Press ►.

The clock setting screen appears.

3 Press ◄ ► to select the item (day, hour, minute) to adjust.

4 Press ▲▼ to adjust.

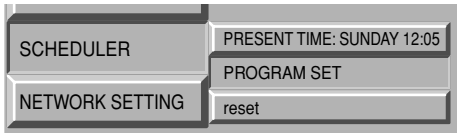
To finish the procedure, press MENU/EXIT repeatedly.

Setting the Power-on/off Timer

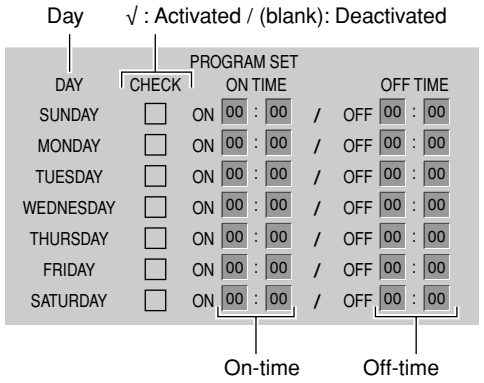
You can set the time to turn on/off the monitor for each day of the week.

- To use the Power-on/off Timer, you need to set the clock.

1 Select “PROGRAM SET” on the SCHEDULER sub menu of the set-up menu.



2 Press ►.



3 Press ▲▼ to select the day, then press ►.

4 Press ▲▼ to activate/deactivate the timer.

5 Press ►.

6 Press ▲▼ to adjust the hour for on-time.

7 Repeat steps 5 and 6 to adjust the minute for on-time, then hour and minute for off-time.

- To set the timer for another day, press MENU/EXIT to highlight the day, then repeat steps 3 to 7.

To finish the procedure, press MENU/EXIT repeatedly.

Using the Motion Sensor

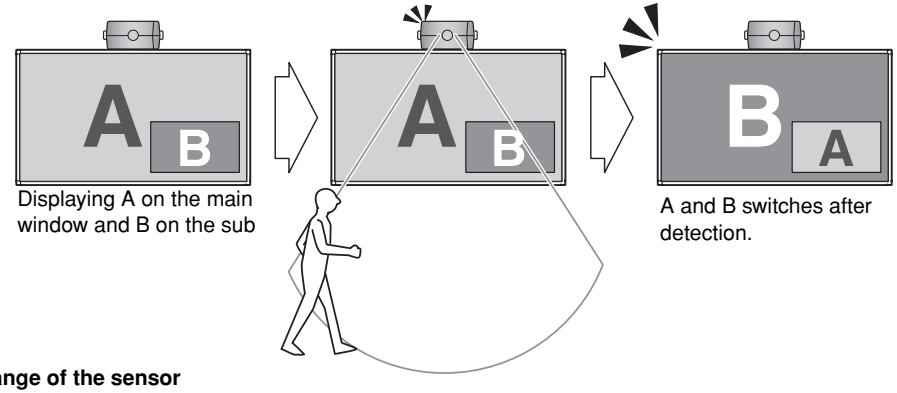
Outline of the motion sensor

By connecting the supplied motion sensor, you can set the monitor to perform the specified operation when the sensor detects the motion of human around the monitor. The status of the monitor returns automatically to that before detecting human if the sensor does not detect any motion for a certain period of time.
The sensor is the pyroelectric infrared-ray-detection type.

Operations controlled by the motion sensor

(1) Turning the monitor on/off	When the sensor detects the motion of human around the monitor, the monitor turns on.
(2) Changing the volume level	When the sensor detects the motion of human around the volume level changes to the specified level.
(3) Changing the input	When the sensor detects the motion of human around the monitor, the input changes.
(4) Switching the main display and sub display for Dual Display	When the sensor detects the motion of human around the monitor with the Dual Display activated, the main display and sub display switch.
(5) Changing the backlight brightness	When the sensor detects the motion of human around the brightness level changes to the specified level.

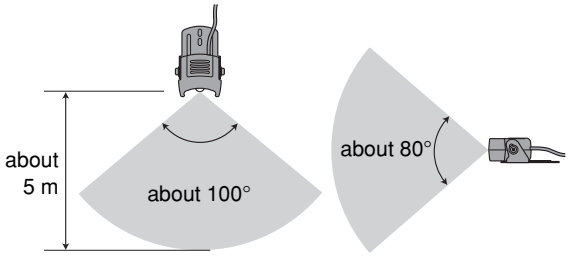
Example: When the setting (4) above is activated...



Displaying A on the main window and B on the sub

A and B switches after detection.

Detection range of the sensor



NOTE

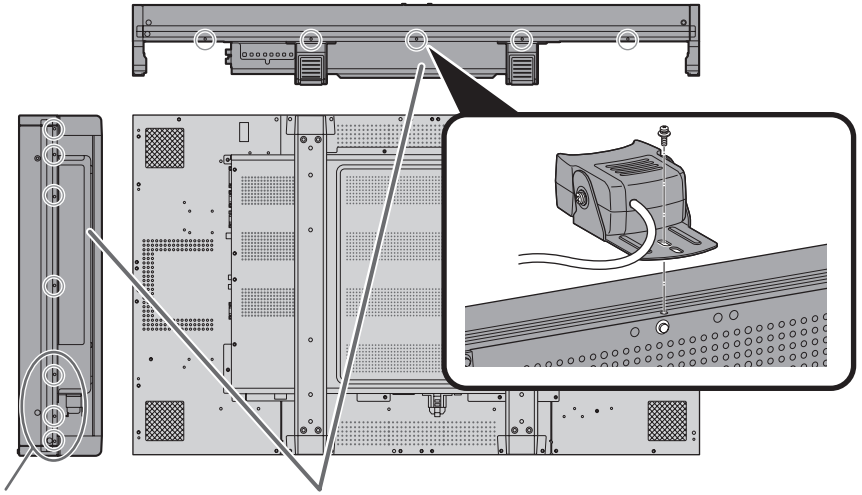
- *The detection area above is reference. The actual detection range may differ depending on temperature, size of the moving human, color of cloth, moving speed and direction, etc.*
- *The sensor can detects only a moving human in the detection area.*
- *The sensor detects the motion of a human more sensitive if the human is close to the motion sensor.*
- *Do not touch the light-receiving part of the sensor directly. It may reduce its sensitivity.*
- *Glass between the sensor and human much reduces the sensitivity.*

Installation and connection

The motion sensor can be attached to either of 24 screw holes on the main unit (5 screw holes on the top and bottom, and 7 on the right and left side). Choose an appropriate position according to the installation place of the monitor. The cable length of the sensor is about 1.5m (5 feet).

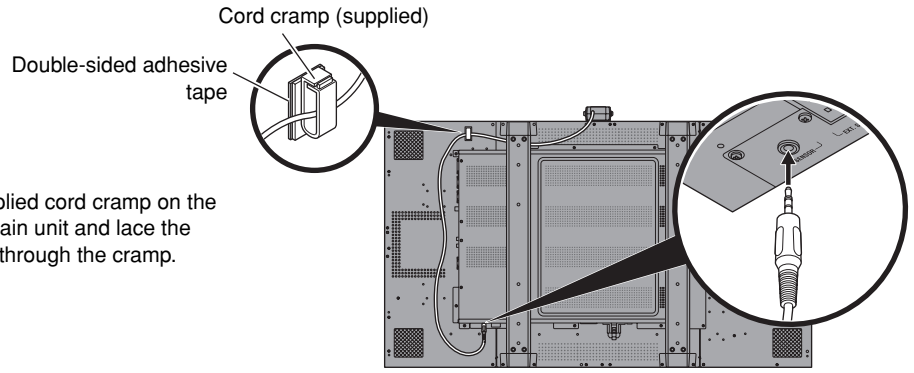
CAUTION

- *Firmly attach the sensor to prevent the sensor from falling.*



Not available when the monitor is installed using the supplied stand.

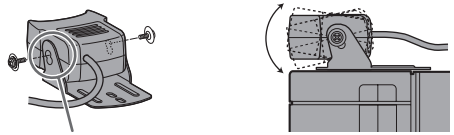
The bottom and the right side have screw holes at the same positions as those on the top and the right side, respectively.



Stick the supplied cord cramp on the back of the main unit and lace the sensor cable through the cramp.

Angle of the sensor

You can adjust the vertical angle of the motion sensor.
Change the screw holes on the sides of the sensor to upper ones and adjust the angle.

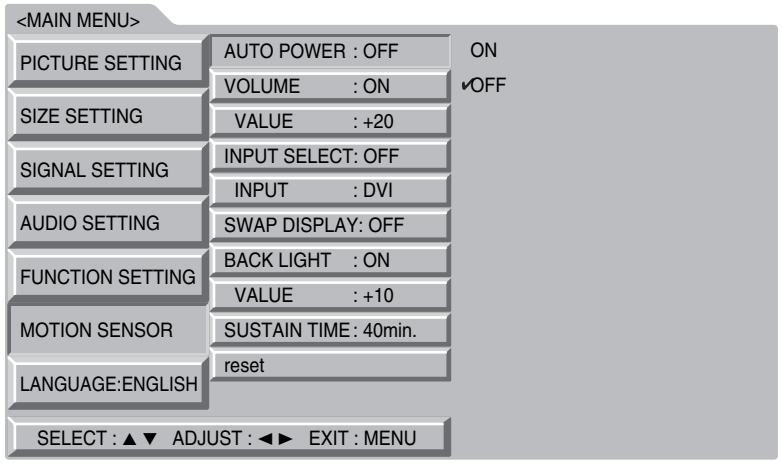


Change the screw holes to upper ones.

Setting

Make the settings for the motion sensor on “MOTION SENSOR” of the main menu.

• For the menu operation procedure, see page 12.



Item	To do	Setting value
AUTO POWER	To turn on the monitor when the motion sensor detects the motion of human, select “ON.” The monitor automatically turns off when the sensor detect no human motion for a certain period of time.	ON, OFF
VOLUME	To change the volume level when the motion sensor detects the motion of human, select “ON.”	ON, OFF
VALUE	Adjust the volume level when “VOLUME” above is “ON.”	00 ←→ 30
INPUT SELECT	To change the input when the motion sensor detects the motion of human, select “ON.”	ON, OFF
INPUT	Select the input when “INPUT SELECT” above is “ON.”	VIDEO, RGB, DVI
SWAP DISPLAY	To switch the main display and sub display of the Dual Display when the motion sensor detects the motion of human, select “ON.”	ON, OFF
BACK LIGHT	To change the brightness of the back light when the motion sensor detects the motion of human, select “ON.”	ON, OFF
VALUE	Adjusts the brightness level when “BACK LIGHT” above is “ON.”	–20 ←→ +20
SUSTAIN TIME	Set the duration of the status set above when human is detected.	0 min. ←→ 60 min.
reset	Restore the default setting for the items in “MOTION SENSOR.”	

NOTE

- *While the function is controlled by the motion sensor, only the external control by the MAKE system can control that function. You cannot use other external control and the buttons on the remote control and the monitor.*
- *The status of the monitor returns automatically to that before detecting human as the time set on “SUSTAIN TIME” passed without another detection. The monitor turns off when “AUTO POWER” is “ON”.*
- *When “SUSTAIN TIME” is set to “0 min.”, the main unit takes the actions set for about 1 second. You can use the setting for checking the operations and detection area of the motion sensor.*

The information from the motion sensor can be used on the external control equipment connected through the RS-232C terminal to control the main unit.

Set all “MOTION SENSOR” settings to “OFF” when processing the information from the sensor on the external control equipment. Consult your dealer for more information.

How to Use External Control

About the external control

This monitor has the following external control terminals:

- **RS-232C terminal:** Controls the monitor by external control equipment (a personal computer or a dedicated controller) (see “Using the serial communication” on page 21).
- **RS-485 terminals:** The following external control systems are available.
  - **(1) Serial communication:** Controls the monitor by external control equipment (a personal computer or a dedicated controller) (see page 21).
  - **(2) IR OUT system:** Controls other equipment through the monitor by using the remote control supplied with the equipment.
  - **(3) MAKE (make contact system):** Controls the function by short-circuiting the corresponding pin terminal to the GND pin terminal, or disconnecting (opening) it (see page 22).
  - **(4) TRIG. (trigger system):** Controls the function by inputting the pulse signal instantaneously to the corresponding pin terminal (see page 22).
- **LAN terminal (10BASE-T):** Controls the monitor from a PC in the network through the web browser (see “Using the LAN system” on page 23).

Set the following items in “REMOTE SYSTEM” according to the external control terminal and control system you use (see page 15).

Control system		“REMOTE IN SEL.” setting	“CNT. RJ45 OUT” setting	“CNT. RJ45 IN” setting
Serial communication	**RS-485**	RJ-45*1	RS485	RS485
	RS-232C	D-sub9*1	RS485	RS485
IR OUT system		Any	IR OUT	Any
MAKE system		RJ-45	RS485	MAKE
TRIG. system		RJ-45	RS485	TRIG.
LAN system*2		LAN	Any	Any

*1 *For the monitor connected to the external control equipment, set “REMOTE IN SEL.” according to the actual connection. Set other monitors to “RJ-45.”*

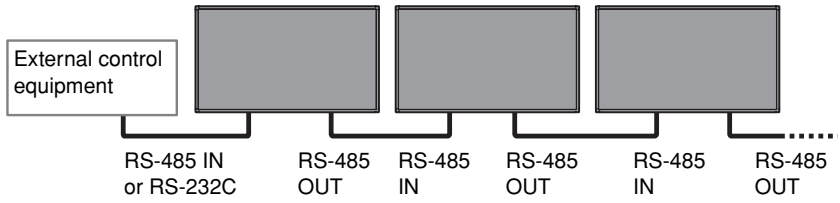
*2 *Set “NETWORK SETTING” in the set-up menu (see pages 16 and 23).*

NOTE

- *The functions controlled by an external device through the MAKE connection cannot be controlled on the main unit or the remote control.*
- *While the Control Lock (see page 16) is in use, you can use external control.*

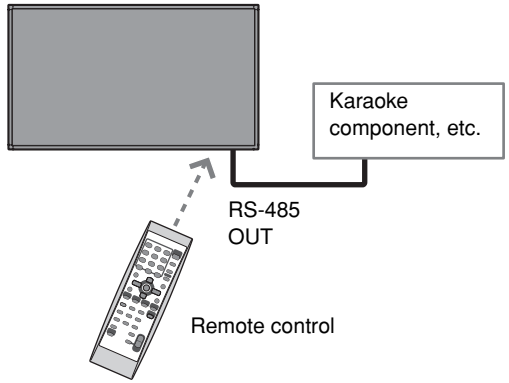
<Serial communication>

Several monitors can be controlled by connecting their RS-485 IN and OUT terminals. See also page 21.
Do not use the AC OUT terminal on the monitor for power supply to another monitor.



<IR OUT system>

Control signals from the remote control of external equipment are sent out to the equipment through the RS-485 OUT terminal.



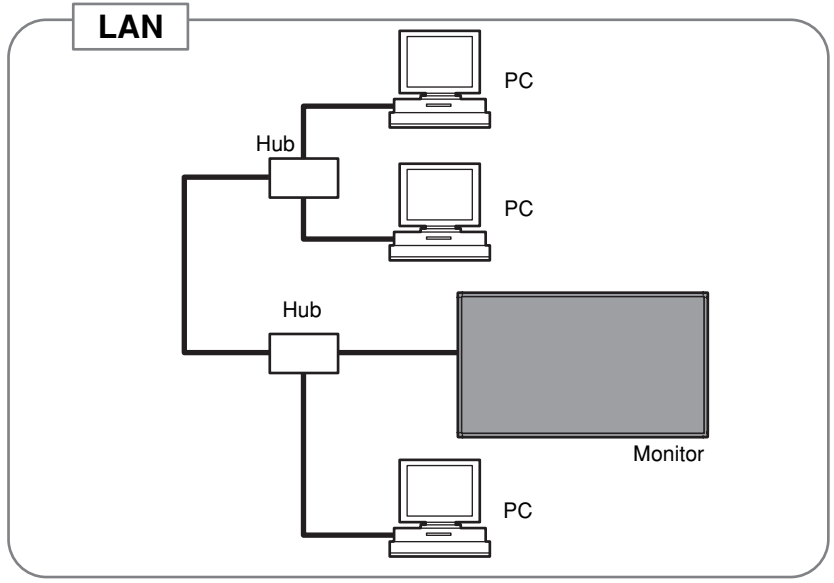
<MAKE/TRIG. system>

You can control the monitor by external control equipment*3. See also page 22.

*3 *External control equipment is not commercially available. Consult your dealer if you need a dedicated controller.*

<LAN system>

You can control the monitor from PC in your Local Area Network (LAN) through the web browser.



Using the serial communication

You can control the monitor from external control equipment (a personal computer or a dedicated controller) via the RS-485 or RS-232C terminal.

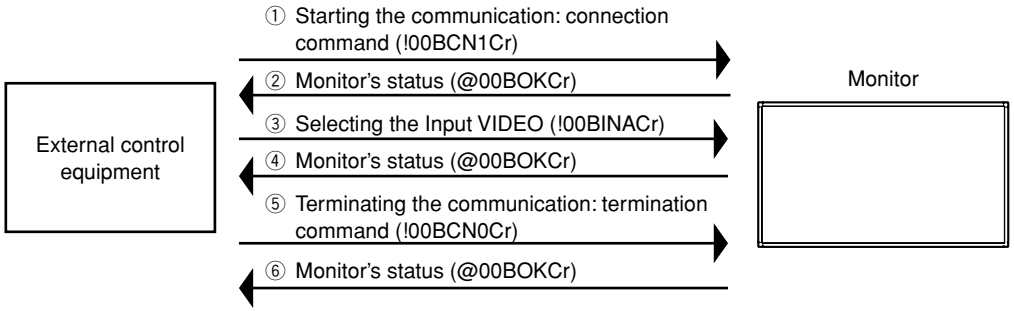
<Communication specifications>

Input terminal	Cable	Terminal specification	Communication specifications
RS-485	A straight LAN cable	See below.	Baud Rate: 4800 bps Data Bits: 8 bits Parity: No parity Stop Bits: 1 bit Flow Control: No control Communication Code: ASCII Code
RS-232C	A straight cable with a RS-232C connector (male for the monitor, female for the external control equipment)		

<Command outline>

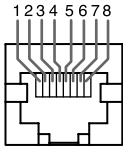
When the monitor is turned on, the external control is not ready.
To start communication, send the connection command from the external control equipment.
To terminate the communication, send the termination command from the external control equipment.

Example of communication procedures:


① Starting the communication: connection command (!00BCN1Cr)
② Monitor's status (@00BOKCr)
③ Selecting the Input VIDEO (!00BINACr)
④ Monitor's status (@00BOKCr)
⑤ Terminating the communication: termination command (!00BCN0Cr)
⑥ Monitor's status (@00BOKCr)
External control equipment
Monitor

- Commands starting with "!" are operation commands from the external control equipment. For details, see <Basic command list> on the right.
- Commands starting with "@" are status returns from the monitor.

<Specifications of the RS-485 terminal>

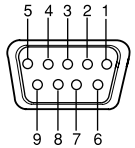


This is a female terminal.

Pin No.	IN terminal signal	OUT terminal signal
1	TXD +	TXD +
2	TXD –	TXD –
3	RXD +	RXD +
4	NC	NC
5	NC	IR. OUT
6	RXD –	RXD –
7	5 V power	NC
8	GND	GND

- The 5 V power supply of the 7th terminal is for the dedicated controller. Do not use it for other devices.

<Specifications of the RS-232C terminal>



This is a female terminal.

Pin No.	Signal
1	—
2	RD (Receive Data)
3	TD (Transmit Data)
4	—
5	GND (Ground)
6	—
7	RTS
8	CTS
9	—

- The 7th terminal and the 8th terminal are connected.

<Basic command list>

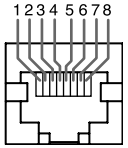
No.	Commands	Functions	Data
1*	! * * B C N 1 Cr	Starts communication (connection)	No data
2*	! * * B C N 0 Cr	Terminates communication (termination)	No data
3	! * * B I D S E T x x Cr	Assigns the control ID	01 – 25
4	! * * B I D R E T Cr	Initializes the control ID	No data
5	! * * B I D D S P x x Cr	Displays/hides the ID	00: Hide, 01: Display
6	! * * B I D C H K x x Cr	Flashes/hides the selected ID No. of the monitor	00: Hide, 01: Flash
7	! * * B M E N U Cr	Displays the MAIN MENU/Quits the menu operation	No data
8	! * * B U P Cr	Moves the cursor upward (▲)	No data
9	! * * B D O W N Cr	Moves the cursor downward (▼)	No data
10	! * * B A D J R Cr	Makes setting/adjustment (►)	No data
11	! * * B A D J L Cr	Makes setting/adjustment (◄)	No data
12	! * * B E N T E R Cr	Enters the password for the Security Lock	No data
13	! * * B S E T U P Cr	Displays the SET-UP MENU	No data
14*	! * * B P W 1 Cr	Turns on the monitor	No data
15	! * * B P W 0 Cr	Turns off the monitor	No data
16	! * * B I N A Cr	Selects Input VIDEO	No data
17	! * * B I N B Cr	Selects Input RGB	No data
18	! * * B I N C Cr	Selects Input DVI	No data
19	! * * B D I S P Cr	Displays the status	No data
20	! * * B V P L S Cr	Turns the volume up	No data
21	! * * B V M N S Cr	Turns the volume down	No data
22	! * * B V O L x x Cr	Adjusts the volume	0 – 30
23	! * * B A M U T E x x Cr	Turns muting on/off	00: Off, 01: On
24	! * * B A S P x x Cr	Selects the aspect ratio	00: REGULAR, 01: FULL, 02: ZOOM, 03: PANORAMIC, 04: REAL DOT
25	! * * B A S P T Cr	Changes the aspect ratio	No data
26	! * * B P I C M O D x x Cr	Selects the picture mode	00: DYNAMIC, 01: NORMAL, 02: USER
27	! * * B P I P x x Cr	Turns on/off the PIP mode	00: Off, 1: On
28	! * * B P B P x x Cr	Turns on/off the PBP mode	00: Off, 1: On

** These commands can be used while the monitor is on standby.*

- "**" substitutes the ID number of the monitor. The initial setting is "00." When 2 or more monitors are connected and controlled, the commands for the ID "00" controls all the monitors.
- Enter the appropriate data to "xx" or "x."
- "Cr" is 0Dh.

Using the MAKE/TRIG. system

The RS-485 IN terminal is configured as follows. You can assign the functions to each pin terminal by setting "REMOTE SYSTEM" (see "PORT F1 – PORT F5" on page 15).



This is a female terminal.

Pin No.	Pin name	Pin No.	Pin name
1	PORT F1	5	PORT F5
2	PORT F2	6	ENABLE
3	PORT F3	7	NC
4	PORT F4	8	GND

To assign the functions to the pin terminals

For the operation procedure, see page 12.

1. **Select "REMOTE SYSTEM" on the set-up menu.**
2. **Set "CNT. RJ45 IN" to "SET."**
3. **Select a pin name ("PORT F1" – "PORT F5") which you want to assign a function, and then select the function you want to assign.**
   - For functions which can be assigned, see the table below.

Functions controlled by MAKE/TRIG. system

Display	Functions to be controlled	Opening	Short-circuiting
VIDEO	Changes the input to VIDEO.	Invalid	Valid
RGB	Changes the input to RGB.	Invalid	Valid
DVI	Changes the input to DVI.	Invalid	Valid
POWER	Turns on/off the monitor.	Power on	Power off (standby)
ASPECT	Changes the aspect ratio.	REGULAR	FULL
MUTING	Turns off or resumes the volume.	Muting off	Muting on
PIP	Turns on/off the PIP mode (see page 11).	Invalid	Valid
PBP	Turns on/off the PBP mode (see page 11).	Invalid	Valid
– – –	No function	—	—

NOTE

- *You cannot assign the same function to different pin terminals.*
- *The TRIG. (trigger) system switches each function by short-circuiting for approx. 1 second.*

Operation

1. **Short-circuit the 6th pin terminal (External control) to the 8th pin terminal (GND) so that the monitor can be controlled by the external control.**
2. **Set "CNT. RJ45 IN" of "REMOTE SYSTEM" to "MAKE" or "TRIG." on the set-up menu.**
3. **When selecting "MAKE" (make contact) system:**
   Operate each function by short-circuiting the corresponding pin terminal to the 8th pin terminal (GND) or opening it.
   When selecting "TRIG." (trigger) system:
   Operate each function by Pulse control, that is short-circuiting the corresponding pin terminal to the 8th pin terminal (GND) for about 1 second.

NOTE

- *When changing input, only one terminal must be short-circuited. (Other terminals must be opened.)*
- *When switching PIP and PBP modes, open the mode which has been short-circuited before short-circuiting the mode you want to make valid.*
- *When selecting the "TRIG." (trigger) system, you can operate only one function at a time. Operate the functions one by one.*

Using the LAN system

Recommended operating environment	Operating system: Microsoft® Windows® XP/Windows® Vista Browser: Microsoft® Internet Explorer® 6.0 and 7.0
Cable	Ethernet cable (Category 5 or higher)

To join the network

For the operation procedure, see page 12.

NOTE

- About the IP address, sub net mask, default gateway, and DNS server, consult the person in charge of your network.
- Before starting the setting, connect the monitor to the network, turn on the monitor, then wait for about 30 seconds.
- Two or more PCs cannot log in at the same time.
- The PC automatically logs out in about 30 minutes after the last operation.
- LAN component of this monitor conforms to 10BASE-T.

1. **Select "NETWORK SETTING" on the set-up menu.**
2. **Set "IP ADDRESS," "SUBNET MASK," "DEFAULT GATEWAY," and "DNS SERVER."**
   1 Press ▲▼ to select the item, then press ►.
   2 Enter the number by using ▲▼ or number buttons.
   3 Press ► to move to the next item.
   4 Press MENU to finish the setting.

- To restore the default setting, perform "reset" in "NETWORK SETTING."

Operation on the web browser

Make sure that the monitor, personal computer, and router (or hub) is connected with the network cable, then turn on them.
Enable JavaScript of the browser before starting the operation.

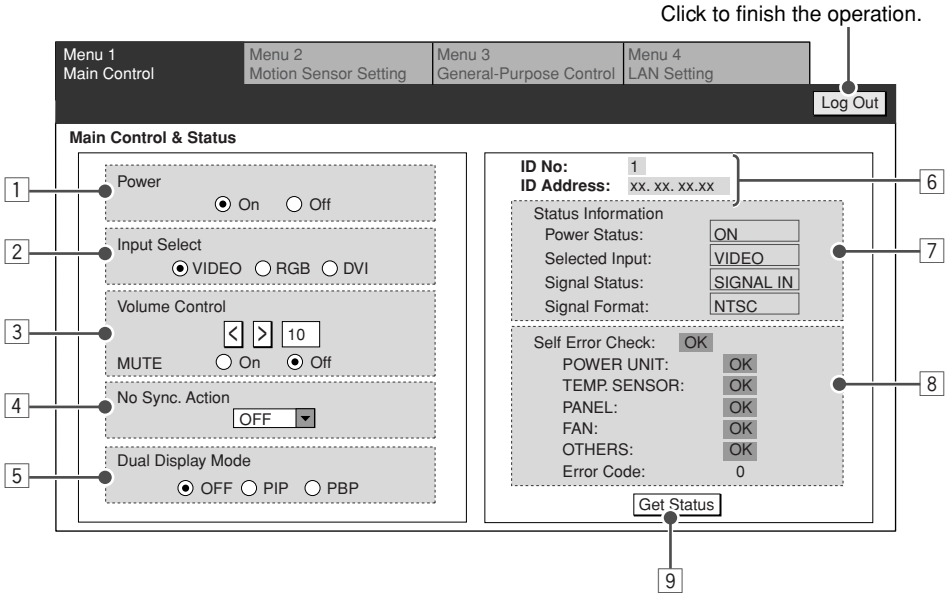
1. **Start Internet Explorer (6.0 or 7.0) on the computer.**
2. **Enter the IP address of the monitor to the address bar, then press Enter on the keyboard.**
   The log-in screen appears.

3. **Click "OK."**
   - No log-in name is set when shipped from the factory. See page 25 to set a log-in name.
4. **Click the function tab you want to use.**
   - For details about each function tab, see the right and pages 24 and 25.

To finish the operation, click "Log Out."

<Main Control>

Basic controls of the monitor (such as turning on/off the power). You can also confirm the status of the monitor.



1 Turns on/off the monitor.
2 Selects the input.
3 Adjusts the volume level and activates/deactivates muting.
4 Selects the screen status while no signal is coming in.
5 Selects the Dual Display mode.
6 Displays the ID and IP address of the monitor.
7 Displays the status of the monitor.
- Power to the monitor (turned on or off)
- Current input
- Status of the input signal (coming in or not)
- Input signal format

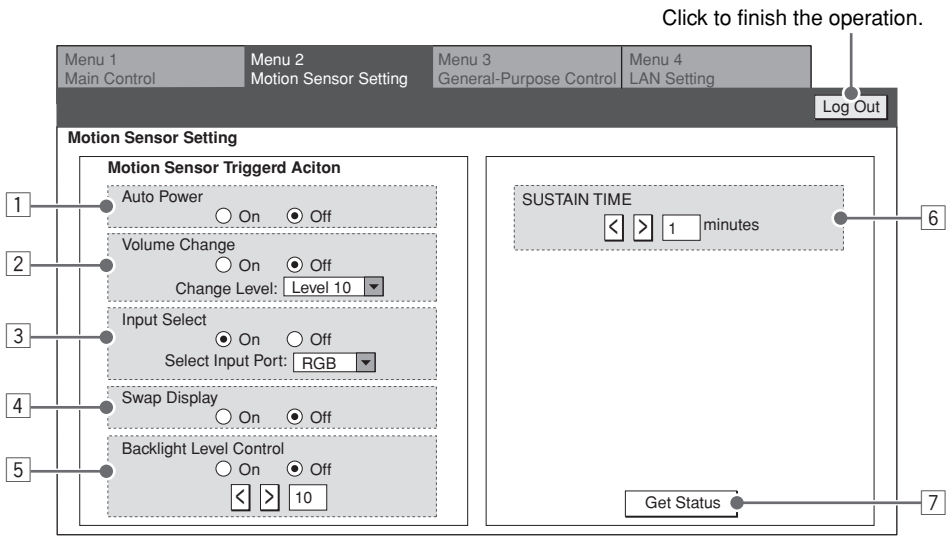
8 Displays the self-check result of the monitor.
The status of the power unit, temperature sensor, monitor panel, etc. is indicated.
9 Click to update the status display (6, 7, 8).

How to Use External Control (cont.)

<Motion Sensor Setting>

Setting screen for the motion sensor.

- For details about settings of the motion sensor, see page 19.



1 To turn on the monitor when the motion sensor detects the motion of human, select “ON.”

2 To change the volume level when the motion sensor detects the motion of human, select “ON,” then select the volume level.

3 To change the input when the motion sensor detects the motion of human, select “ON,” then select the input.

4 To switch the main display and sub display of the Dual Display when the motion sensor detects the motion of human, select “ON.”

5 To change the brightness of the back light when the motion sensor detects the motion of human, select “ON,” then select the brightness level.

6 Specify the period* for the monitor to keep the specified operation.

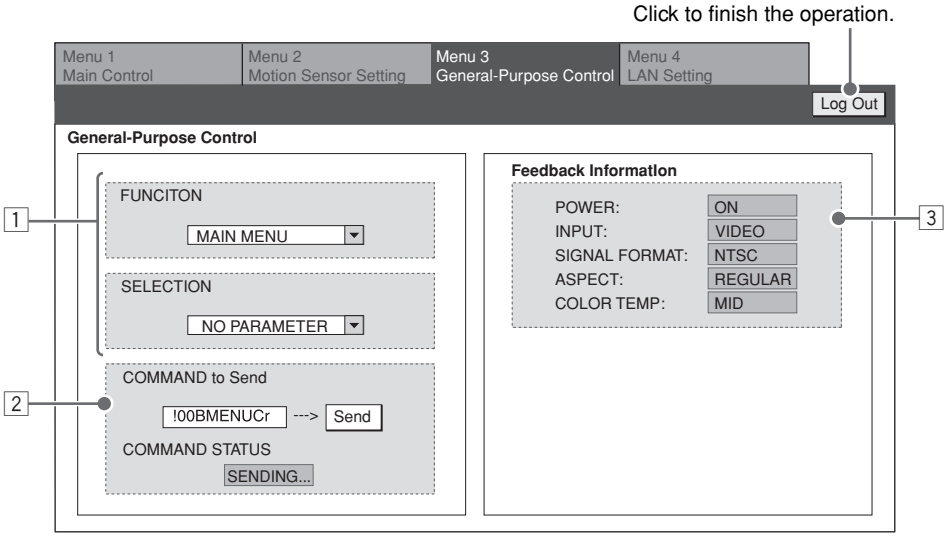
7 Loads the current settings from the monitor.

** Counted from when the sensor detects a motion of human at the last time.*

<General-Purpose Control>

Operation screen for various functions.

- The monitor may not operate as commanded in some cases. Always check the monitor status.



1 Selects the function to operate (“FUNCTION”), then its setting value (“SELECTION”).
Ex.: When changing to the aspect to “FULL”

FUNCTION

ASPECT (DIRECT) ▼

SELECTION

FULL ▼

- If the selected function does not have the setting values, “NO PARAMETER” is displayed for “SETTING.”

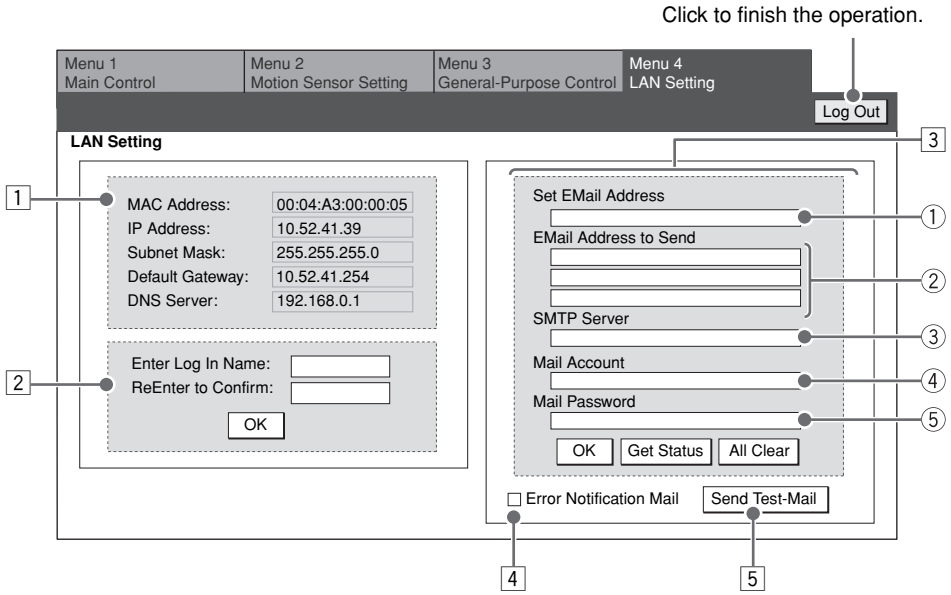
2 Displays the command for the operation selected in 1.
Click “Send” to send the command to the monitor. “SENDING” appears in the “COMMAND STATUS” window while the command is being sent.

3 Displays the status of the monitor.

- Power to the monitor (turned on or off)
- Current input
- Input signal format
- Aspect setting
- Color temperature setting

<LAN Setting>

Setting the log-in name for the control screen and E-mail of the monitor. You can also confirm the network setting.



1 Displays the current network setting.

2 Sets the log-in name to log in the web control screen.
- Up to 8 characters can be used.

Click “OK” to confirm the log-in name setting.

3 E-mail settings for the monitor to send the error notification via E-mail.
- For details about the setting, consult the person in charge of the mail server.

① Enter the mail address for the monitor.

② Enter the E-mail address (up to 3 addresses) to receive the error notification from the monitor.
- Up to 48 characters can be used for each mail address.

③ Enter the SMTP server address (up to 32 characters).

④ Enter the E-mail account of the monitor (up to 16 characters).

⑤ Enter the Email password of the monitor (up to 16 characters)

Click “OK” to confirm the mail setting.
Click “Get Status” to load the current settings.
Click “All Clear” and then “OK” to delete the mail setting.

4 Check here to receive the error notification from the monitor.
The error message is sent to the mail address specified in 3-②.

5 Click to send the test mail.

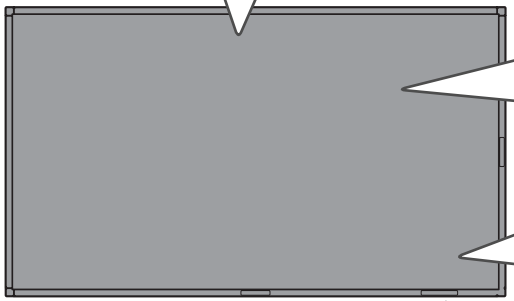
- You may not be able to send E-mails depending on the network environment or the verification settings of the server.
- “POP before SMTP” is not supported.

Troubleshooting

Solutions to common problems related to the monitor are described here. If none of the solutions presented here solves the problem, unplug the monitor and consult an authorized dealer or service center.

Power is not supplied.
⇨ Is the power cord connected (see page 6)?
⇨ Is the main power switch (POWER) turned on (see page 10)?

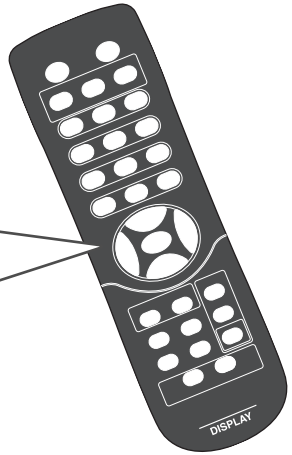
No picture.
⇨ Is the correct input selected (see page 10)?
⇨ Connect the signal cable firmly.
⇨ Check if the input signal format is acceptable on the monitor.
⇨ Are the devices connected correctly (see page 6)?
⇨ Are signals being input from the connected devices?
⇨ Is brightness adjusted correctly (see page 13)?



No sound.
⇨ Is the volume set at minimum (see page 10)?
⇨ Is the muting function activated (see page 10)?
⇨ Is “AUDIO ASSIGN” set correctly (see page 13)?

Self-diagnostic lamp lights (flashes).
⇨ See page 28 for details.

The remote control does not work.
⇨ Are the batteries installed correctly (see page 5)?
⇨ Are the batteries exhausted?
⇨ Is the front end of the remote control pointing toward the remote sensor?
⇨ Is there any object blocking the path between the remote control and the remote sensor?
⇨ Is the monitor too far away from you?
⇨ Are the functions of motion sensor set to “ON”?



Symptom	Probable cause and corrective action	Page
Power is suddenly turned on or off.	• The Power-on/off Timer is activated. Deactivate it.	17
	• “AUTO POWER” of “MOTION SENSOR” is set to “ON.” Deactivate it.	19
The picture becomes blurred.	• Adjust “CONTRAST” or “BRIGHT” of “PICTURE SETTING.”	13
	• For RGB input, adjust “DOT CLOCK” and “CLOCK PHASE” on the main menu.	13
	• If the connection cable used for the RGB IN terminal is long, set “SYNC TERM.” to “LOW.”	16
Color is abnormally bright or dark.	• Adjust the picture quality on “PICTURE SETTING” of the main menu.	13
	• If “TEMP. OVER” is displayed, follow the procedure described on page 28.	28
Color is poor or unstable.	Select the correct color system.	14
The picture is cut or shifted toward one side.	• Input signals (scanning frequency, etc.) are not appropriate.	8
	• Adjust the size and position properly.	13
Some items cannot be selected on the menu.	Items not available for the current input or signal format cannot be selected. Change the input or signal format.	—
“PLEASE ENTER PASS ID” appears when trying to turn on the monitor.	The Security Lock is activated. Enter the password to turn on the monitor, and then deactivate the Security Lock.	15, 17
Buttons on the main unit do not work.	• The Control Lock is activated. Deactivate it.	16
	• You cannot use the buttons for the items controlled by the external control. Disable the external control.	—
	• You cannot use the buttons for the items controlled by the motion sensor. Deactivate the control by the sensor.	19
The motion sensor does not work.	If the detection parts (lens) of the sensor is dirty, the sensing level decreases. Wipe the lens with soft cloth.	—
	• The motion sensor does not work when all the motion sensor settings are “OFF.”	19
The motion sensor does not detects the human in the detection area.	• The sensor will not detect a human who is not moving. • The detectivity of the sensor decreases when the temperature difference between a body and environment is small.	—
The motion sensor works while no human is in the detection area.	In the following cases, the sensor detects the motion and makes the monitor perform the specified operation. • Animals such as dogs and cats are moving around the monitor. • Clothes (such as curtain) or plants swaying in the wind is around the monitor.	—

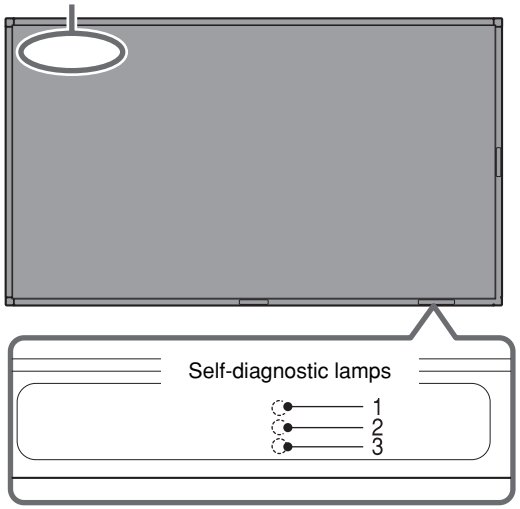
The following are not malfunctions.

- When a still image is displayed for a long time, it may remain indistinctly on the screen after the picture has changed. Though the remaining picture will disappear after a while, there may be a case that it remains for a long period depending on the length of time the still image was displayed for. This is due to the characteristics of the LCD display and is not a malfunction.
- The red spots, blue spots and green spots on the panel surface are a normal characteristic of LCD displays, and not a problem. The LCD display is built with very high precision technology; however, be aware that a few pixels may be missing or constantly lit.
- The following symptoms are problems only when pictures or sounds are not played back normally.
  - A slight electric shock occurs when you touch the monitor.
  - The top and/or rear panel of the monitor becomes hot.
  - The monitor emits a cracking noise.
  - The monitor emits a mechanical noise.

Troubleshooting (cont.)

Self-diagnostic indication

When something abnormal occurs with the monitor, this function informs you of the condition of the monitor with the self-diagnostic lamps, allowing for smooth service work.



If the monitor screen turns off and the self-diagnostic lamps light or flash

If the self-diagnostic lamps light or flash in red, check the following before consulting the dealer where you purchased the monitor.

- If the self-diagnostic lamp 1 lights, lamp 2 flashes, and lamp 3 lights.
  This may be caused by the dusty intakes on the rear and top. If this happens, switch off the main power using the power switch (set to "○ (off)"), unplug the AC power cord, then clean the intakes by referring to the instruction on page 3.
  After cleaning, switch on the monitor's main power again. If the self-diagnostic lamps do not go off, consult your dealer immediately.

If the monitor screen dims a little and "TEMP. OVER" appears (or flashes)

If "TEMP. OVER" appears or flashes at the left top of the screen, check the following before consulting the dealer where you purchased the monitor.
"TEMP. OVER" appears to warn you of internal heat buildup, which is usually caused by accumulated dust around the intakes or by improper installation. If the cause of the internal heat buildup is eliminated, this indication disappears and the screen returns to normal brightness.

- If "TEMP. OVER" flashes in yellow
  This may be caused by the dusty intakes on the rear. If this happens, switch off the main power using the power switch (set to "○ (off)"), unplug the AC power cord, then clean the intakes by referring to the instruction on page 3.
  – After cleaning, switch on the monitor's main power again. If "TEMP. OVER" still flashes, this problem may be caused by improper installation or improper location of the monitor. In this case, consult your dealer immediately to solve this improper installation and to improve the circumstances around the monitor.
- If "TEMP. OVER" appears in red
  "TEMP. OVER" will be shown for about two minutes, the monitor will shut off automatically, then the self-diagnostic lamps light in red. If this happens, switch off the main power using the power switch (set to "○ (off)"), unplug the AC power cord, then consult your dealer immediately.

If the trouble still persists, follow the procedure below:

1 Check which lamps are lit or flashing.
  On the Self-diagnostic Report Sheet (below), check the box next to "Lights" or "Flashes" of the corresponding lamp or lamps.
  • Only one lamp may light or flash, or all three lamps may do so.
2 Switch off the POWER switch on the back of the monitor.
3 Unplug the power cord.
4 Call your dealer and tell them which lamps are lit or flashing. (Copy and fax the Self-diagnostic Report Sheet below.)

NOTE

- *If you switch on the main power immediately after switching it off (or after recovering from a brief power interruption), the self-diagnostic lamps may light (or flash), and no image may appear on the screen. In this case, switch off the main power again, wait for about 10 seconds, then switch it on again. If no self-diagnostic lamps light or flash, you can operate and use the monitor as usual.*

Self-diagnostic Report Sheet

Store name where you purchased the monitor

To

Model name: LCD DISPLAY MONITOR
GM-F470S/GM-F420S

The self-diagnostic lamps light or flash as listed on the following table. Please give me immediate advice or service if necessary.

Self-diagnostic lamp			
No.	Lamp position	Conditions	
1	Upper	□ Lights	□ Flashes
2	Middle	□ Lights	□ Flashes
3	Lower	□ Lights	□ Flashes

TEMP. OVER	□ Lights	□ Flashes

Your Name	
Telephone No.:	
Address:	

Specifications

General

Model name	GM-F470S	GM-F420S
Type	LCD Monitor	
Screen size	Type 47 wide format	Type 42 wide format
Aspect ratio	16:9 (Wide format)	
LCD panel	47 inch wide, active matrix TFT	42 inch wide, active matrix TFT
Effective screen size (W x H, Diagonally)	1 039 mm x 584 mm (40 7/8″ x 22 15/16″), 1 192 mm (46 7/8″)	930 mm x 523 mm (36 9/16″ x 20 9/16″), 1 067 mm (42″)
Number of pixels displayed	1 920 (H) x 1 080 (V)	
Number of colors displayed	1.07 billion (1 024 colors for each of RGB)	
Viewing angle (TYP.)	178° (Horizontally), 178° (Vertically)	
Brightness (TYP.)	700 cd/m²	
Contrast ratio (TYP.)	1 000:1	
Response time	9 msec	
Weight	30 kg (66 lbs) 31.2 kg (68.7 lbs) (including the stands)	25 kg (55 lbs) 26.2 kg (57.7 lbs) (including the stands)
External dimensions (W x H x D)	1 076 mm x 621 mm (42 3/8″ x 24 1/2″), 152 mm (6″)	964 mm x 557 mm (38″ x 22″), 152 mm (6″)
	When the stand is attached: 1 091 mm x 626 mm (43″ x 24 3/4″), 326 mm (12 7/8″)	When the stand is attached: 979 mm x 562 mm (38 5/8″ x 22 1/8″), 326 mm (12 7/8″)
Power requirements	AC 120 V/AC 220 – 240 V, 50 Hz/60 Hz	
Rated input current	4.9 A (AC 120 V) 3.6 A (AC 220 – 240 V)	4.3 A (AC 120 V) 3.3 A (AC 220 – 240 V)
Compatible signals	See page 8.	
Audio power output	Internal: 1.7 W + 1.7 W (impedance 8 Ω) External: 6 Ω – 8 Ω, 2.3 W + 2.3 W (at impedance 6 Ω)	
Speaker	Ellipse (70 mm (2 7/8″) x 40 mm (1 5/8″)) x 2, impedance 8 Ω	
Operating conditions	Temperature: 0°C – 40°C (32°F – 104°F) Relative humidity: 20% – 80% (non-condensation) (Slightly variable depending on ambient conditions for installation.)	

Notice on transportation

This monitor is precision equipment and needs dedicated packing material for transportation.
Never use any packing material supplied from sources other than JVC or JVC-authorized dealers.

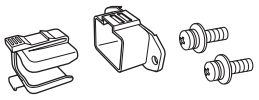
Input/output terminals

VIDEO IN	Video input	BNC terminal x 1	1 V (p–p), 75 Ω
VIDEO OUT	Video output	BNC terminal x 1	1 V (p–p), 75 Ω
RGB IN	RGB input	D-sub 3-row 15-pin x 1 (RGB is compatible with DDC2B.)	
	Video signal		G: 1 V (p–p), 75 Ω (including sync)
			B, R: 0.7 V (p–p), 75 Ω
	Horizontal sync (HD)		HD: 2.0 V (p–p) to 5 V (p–p), (positive/negative polarity)
	Vertical sync (VD)		VD: 2.0 V (p–p) to 5 V (p–p), (positive/negative polarity)
RGB OUT	RGB input	D-sub 3-row 15-pin x 1	
	Video signal		G: 1 V (p–p), 75 Ω (including sync)
			B, R: 0.7 V (p–p), 75 Ω
	Horizontal sync (HD)		HD: 5 V (p–p) (positive/negative polarity)
	Vertical sync (VD)		VD: 5 V (p–p) (positive/negative polarity)
DVI-D (HDCP)	DVI input (compatible with HDCP)	DVI-D terminal x 1 (Compatible with DDC2B)	
AUDIO 1 IN	Audio input	Pin jack terminal x 2 (L/R)	500 mV (rms), high impedance
AUDIO 2 IN	Audio input	Stereo mini jack terminal x 1	500 mV (rms), high impedance
REMOTE	RS-232C input	D-sub 9-pin terminal x 1 (For RS-232C control)	
	RS-485 input	RJ-45 pin terminal x 1 (For RS485, MAKE, and TRIGGER control)	
	RS-485 output	RJ-45 pin terminal x 1 (For RS485 and IR OUT control)	
	LAN	RJ-45 pin terminal x 1 (For LAN control)	
AUDIO OUT	AUDIO 1 OUT	Pin jack terminal x 2 (L/R)	Output impedance 600 Ω
	AUDIO 2 OUT	Stereo mini jack terminal x 1	Output impedance 600 Ω
	EXT. SPEAKER OUT	Speaker output terminal (L/R)	Impedance 6 Ω to 8 Ω
AC OUTLET	AC power output	IEC320 type x 1	Rated output current: 2 A

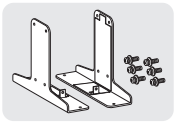
Checking the accessories

The following accessories are included with the monitor. Check for them. If any item is missing, please contact the dealer where you have purchased the monitor.

- Remote control (RM-C1730)
- Batteries (AA/R6) x 2
- Power cord/Power cord holder
- Screws for power cord holder
- Motion sensor unit
  Motion sensor x 1, Screw (M4 x 12 mm) x 1, cord cramp x 5
- Stand unit
  Stand x 2, Screws (M4 x 12 mm) x 6
- Snapping ties x 5
- Covering sticker x 1

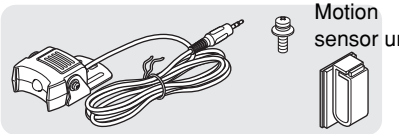


Screws for power cord holder



Stand unit

Snapping ties



Motion sensor unit

Covering sticker

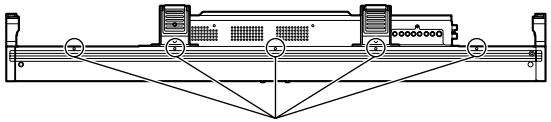
Specifications (cont.)

Dimensions

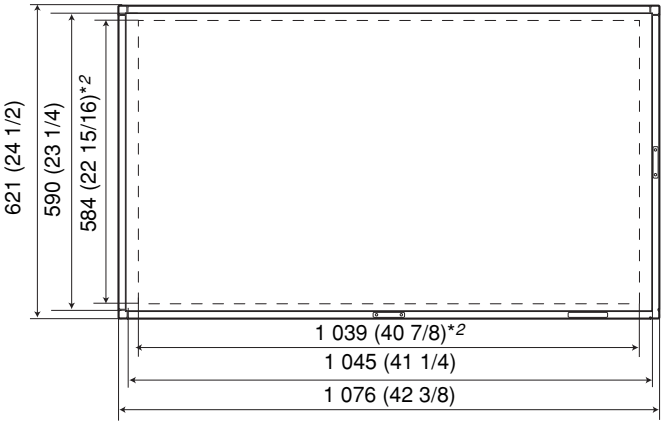
Unit: mm (inch)
*1 Screw holes for optional usage
*2 Effective screen size

GM-F470S

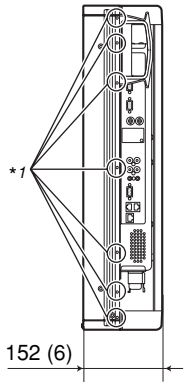
Top view



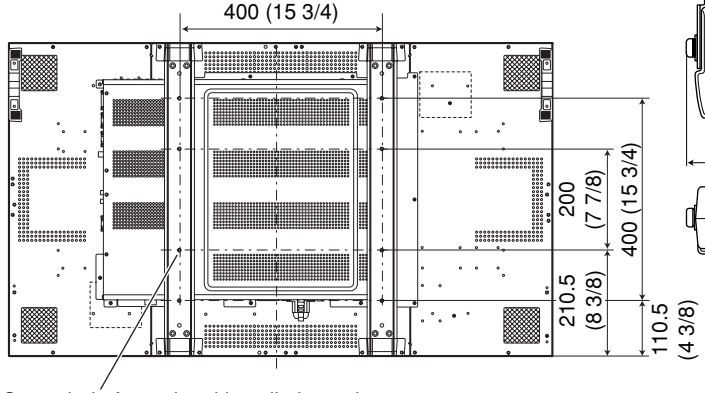
Front view



Side view

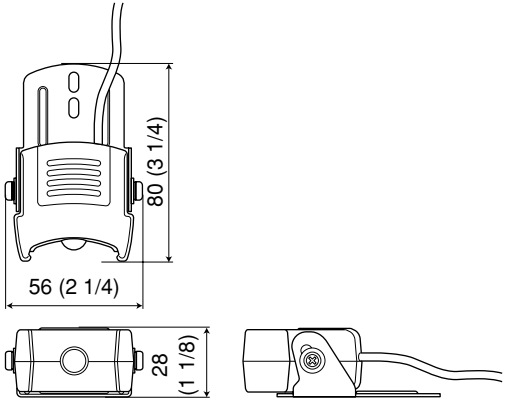


Rear view



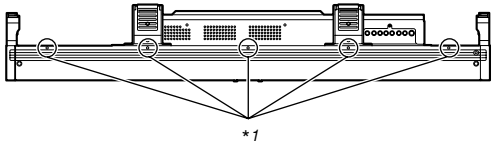
Screw hole for optional installation unit.
Screw size: 8 – M6, depth: 10 mm (VESA standard)

Motion sensor

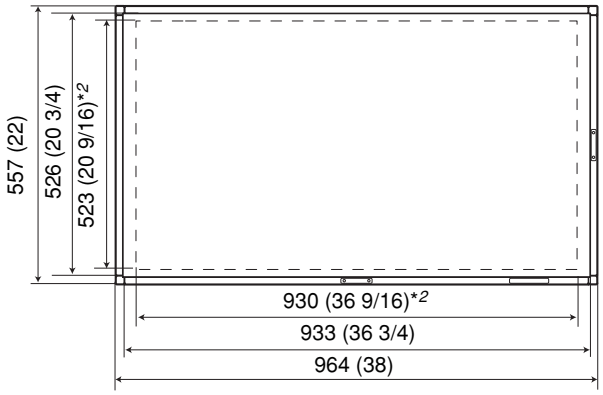


GM-F420S

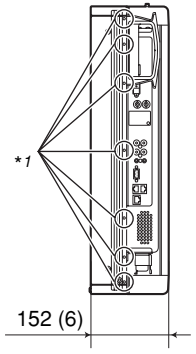
Top view



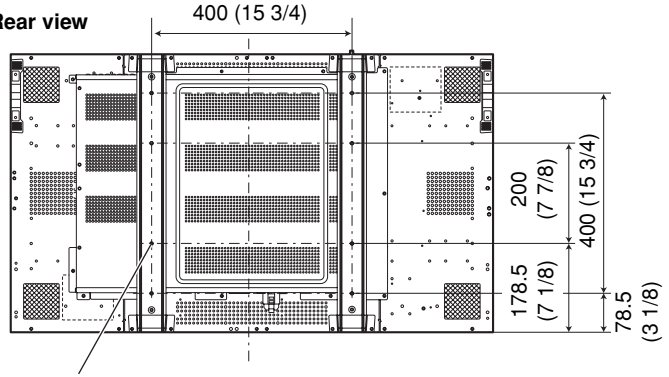
Front view



Side view



Rear view



Screw hole for optional installation unit.
Screw size: 8 – M6, depth: 10 mm (VESA standard)

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- Design and specifications are subject to change without notice.
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